

Air Conditioning & Refrigeration News

The Newspaper of the Industry

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IN THIS ISSUE

How Air Cooling Is Bought

When air conditioning was "the great new invention" it was tough to sell because people didn't know whether it was here to stay. Now that everyone knows it is here to stay—buyers are getting smart. Dealers in air conditioning equipment who will be interested in learning how an architectural firm buys air conditioning should turn to page 10.

Pretty Girls Good For Biz

In the south it's "outdoor taverns" with pretty waitresses in shorts, and up north it's "night clubs" with exotic dancers that lure the customers in for food and drink—but in either case the refrigeration industry profits, as is shown by pictures on pages 5 and 7, illustrating this point (and the girls, too).

Comeback Item

When the counter ice cream freezer industry was young, a fair part of its output was sold by "specialty salesmen" of the refrigeration industry. Then the counter freezer manufacturers developed their own specialists to sell the product. Once again the refrigeration salesman is getting his hand into the counter freezer field—and the reasons are given on page 7.

From Inner Tubes To Refrigerators

Tire retailers are one of the many types of merchandising establishments that in the last few years have gone into appliance retailing. Some of them have been pretty successful. Why? Maybe it's because they apply some sound salesmanship. The story of one such concern is told on page 4.

Lockers For City Slickers

Will the biggest market for refrigerated locker plants be in strictly rural areas? There are some indications now that city locker plants may be the new—and biggest—step in the locker plant field. A veteran in the game discusses this and other trends on page 11.

Expansion Valve Accused—and Acquitted

The expansion valve is probably more wrongly accused of causing defective operation in a refrigeration system than any other single part. An article on "Expansion Valve Troubles Found in Low Temperature Systems" explains how service men can avoid such an error, and how to conduct tests which will demonstrate whether or not the expansion valve is functioning properly. Page 13.

If You Work on Fountains—

If you're doing any work at all on soda fountain servicing, you'll find something of interest on page 12.

Always Something New—

The refrigeration and air conditioning and appliance fields don't stand still. Something new is being developed almost every day, it would seem. Some of the new developments are reported on pages 14 and 2 of this issue.

Average Price Drops In Chattanooga

CHATTANOOGA, Tenn.—A total of 764 refrigerators were sold by Chattanooga electrical appliance dealers during July at an average price of \$132.74. Average price in June had been \$133.71.

Dollar volume of all electrical appliance sales for the month was \$257,140, an all-time high for July. Range sales for the month totaled 295 units at an average of \$120.

Winther Named To York Sales Post



ANKER WINTER

YORK, Pa.—Anker Winther has been made assistant general sales manager of the York Ice Machinery Corp., announces John R. Hertzler, general sales manager.

Mr. Winther is a native of Brooklyn, born there in 1905. He went to Stevens Institute of

(Concluded on Page 16, Column 2)

Eureka Drive Is First With Dealer Set-Up

'30th Birthday Campaign' Offers Combination Deal For \$35.88

DETROIT—In the first major program it has entered since switching over its sales policy from house-to-house selling to merchandising through electrical appliance dealers, Eureka Vacuum Cleaner Co. has launched a "Thirtieth Birthday Campaign," featuring a special combination of a vacuum cleaner and coffee brewer set at a price of \$35.88.

National promotion of the combination offer follows test campaigns in several cities, including Detroit, Milwaukee, Rochester, and Columbus.

Cleaner featured in the campaign is a floor model, built to sell for \$44.75, and the coffee-maker set has a list price of \$10.95 and includes a complete service tray, three crystal relish dishes, cream and sugar set, service tray, and an 8-cup coffee-maker complete with stove.

(Concluded on Page 4, Column 5)

Kelvinator, Canada Shows Sales Gains In All Lines

LONDON, Ont.—Sales increases in all departments—household, commercial, and ice cream cabinet—have been experienced so far this year by Kelvinator of Canada, Ltd.

Business done and orders on hand in the commercial refrigeration division show an increase of 28% over last year, the company reports. Several of Canada's largest food chains and manufacturers have installed equipment, it is reported.

Sales of household refrigerators so far this year are 36% above those of 1939. Experience with mechanical operation of the unit has been outstanding, the company asserts, with less than 1/2 of 1% of the units sold during the last 18 months returned for servicing for any reason.

In the ice cream cabinet division, sales show an increase over last year of 23%, it is reported.

RSES Will Meet At All-Industry Show

CHICAGO—Seventh annual convention of Refrigeration Service Engineers Society will be held in conjunction with the Third Annual All-Industry Refrigeration and Air Conditioning Exhibition at the Stevens hotel here, Jan. 13-16, 1941.

The servicemen's convention will be conducted along the same lines as in past years, educational meetings being confined to the mornings, to give members an opportunity to visit the exhibits in the afternoons and evenings. Sessions will be conducted on the first three days of the All-Industry Show, leaving the last

(Concluded on Page 15, Column 4)

Edwin D. P. Greiner, Pioneer Dealer, Dies

BRONXVILLE, N. Y.—Edwin David Popham Greiner, a pioneer in the air conditioning and refrigeration business in Westchester county and for the past five years manager of the dealer development department of the New York office of Carrier Corp., died suddenly Sept. 10.

Born in Chicago 36 years ago, Mr. Greiner opened one of the first electric refrigeration dealerships in White Plains, N. Y. in 1925, in partnership

(Concluded on Page 15, Column 4)

G-E Leads 6 Mo. Advertising of Air Conditioners

\$147,252 Expended In Magazine Copy By 11 Firms

DETROIT—With all manufacturers except three paring their budgets under the corresponding period of last year, magazine advertising of air conditioning equipment by 11 companies during the first six months of 1940 totaled \$147,252, as compared with \$169,852 for 16 manufacturers in the same period of 1939, according to a recent survey.

Leading the advertisers for the half-year was General Electric Co., with a total of \$49,747 in three national magazines, as compared with \$12,462 for the same period of 1939.

York Ice Machinery Corp. spent \$33,760 in five publications during the first six months of the year, a sizable decline from the \$44,375 spent by this firm in the first half of 1939. Carrier's advertising expenditure during the half-year also showed a slight decline, this year's total standing at \$29,745, as compared with \$31,675 in same period of last year.

Frigidaire, which spent \$15,095 in magazines during the first half of 1939, this year spent but \$5,720 in four publications, but Westinghouse advertising during the period increased from \$8,750 in 1939 to \$10,150 this year.

Slight increases in advertising this year were reported by B. F. Sturtevant.

(Concluded on Page 15, Column 3)

Room Cooler 'Lease' Plan Proves Popular

ST. LOUIS—Room coolers are "leased" to doctors and dentists in the Beaumont building here under a plan worked out by the Real Estate Management Co., operator of the building. The plan was originated following the requests of many tenants in the building for air conditioning in the hot St. Louis summer months.

Just before hot weather struck St. Louis, the heating radiators in many offices were removed and Carrier air conditioning units were installed in their place. Separate electric meters were also installed for each unit, so that the tenants would pay only for the electric power consumed by their own conditioner.

Operator of the building reports the "lease plan" is proving very popular with the doctors and dentists, who contract for the units at a nominal annual sum.

Air Conditioning Growth Taxes Mobile's Sewers

MOBILE, Ala.—Mobile's rapid growth and the widespread use of air conditioning has created a sewage and drainage problem here, according to City Commissioner Charles A. Baumhauer.

In a recent announcement, Mr. Baumhauer asserted that it might be necessary to rebuild the entire sewage system to take care of waste water from air conditioning systems because the sewers were not designed to take care of the water being dumped into them.

Another eight-story air conditioned building, to be erected by the Gulf, expected to aggravate the water and sewage problem.

Last year Mobile claimed to have more tons of air conditioning in proportion to population than any other city in the United States.

Can Dealers Themselves Stop Chiseling? -- They Can If They Have a Plan of Action

G-E Dealers In Milwaukee Employ Own 'Police'

By Robert M. Price

MILWAUKEE — Applying the "let's hang together or we'll hang separately" principle to the appliance business, a group of straight-thinking General Electric dealers in Milwaukee county have banded together with their distributor, E. H. Schaefer Co., to outlaw price cutting and insure a fair profit on sales.

The purpose of the agreement is plain and simple—to enable the dealers to make money. The distributor agreed that the plan that protected profits for dealers also protected his profits. Dealers and distributor got down to business and put the heavy finger on "chiseling," coming out with an agreement that makes the price cutting, discount conscious dealer out of the picture.

The usual "joker" in such agreements was removed by setting up a rigid policing system to keep dealers entirely within the spirit and the letter of the agreement. The chiseling detectives are shoppers hired by the dealers themselves. Any violations are reported and if the dealer is guilty, he may be called upon to forfeit his franchise to sell appliances sold him by the distributor.

The plan is working for both dealers and distributor. Sales figures for the first six months of this year reveal that 43.8% of the household refrigerators sold in the Milwaukee area by distributors of five of the leading makes went to dealers operating under the agreement, according to E. C. Zabors, sales manager of E. H. Schaefer Co.

Germ-Killing Device In Easy Washers

SYRACUSE, N. Y.—Use of an electrical germ-killing device is the standout feature of the 1941 line of Easy washers, unveiled last week before 200 distributors and key representatives at the annual sales convention of Easy Washing Machine Co.

The new line has been completely restyled, and will be priced the most competitively of any in the company's history, J. J. Nance, sales manager, told distributors. Dealers will be given details soon.

Kitchen Design For a Helpless Male



Giving a modern twist to the time-honored masculine cry, "My wife's gone to the country!" was this interest-creating display recently featured on the first floor of the James McCutcheon & Co. store in New York City, which indicated that father could do very well at home by himself—with the aid of modern electric kitchen conveniences.

Circular in form and decorated in red, white, and blue, the display was built around an easy chair, with

"Dad" lettered across its back. The chair slid back and forth on a track, and major equipment within reach included a G-E air conditioner, dishwasher, counter-height refrigerator, studio-type electric range, and numerous small appliances. Adding a novel touch were a device to keep bread moist and disgorge it for toasting, a contraption which measured and dispensed corn flakes, and a newspaper holder. Wallace Speer, McCutcheon official, created the display.

Modine Mfg. Co. Erects New Plant Addition

RACINE, Wis.—Modine Mfg. Co., maker of heating and air conditioning units, is erecting a new one-story addition to house sheet metal, press work, and other departments for radiator production. The new addition will cover about 60,000 sq. ft. of plant floor area.

26 Unit Conditioners Used In Big Store

PITTSBURGH—Airtemp 3 and 5-ton conditioners—26 of them—are used to cool the six selling floors and basement of the downtown store of May-Stern Co. here. Cost of the system was approximately \$15,000, the installation being handled by the store's own maintenance and service staff.

Abb Co. Expands Size Of Quarters Again

JACKSON, Miss.—Abb Plumbing & Heating Co., exclusive dealer here for Stewart-Warner refrigerators, has opened new and larger quarters at 407 W. Capitol St. This is the company's second expansion since its organization little more than a year ago.

Ingenious Construction & Fitting Mark New 'Packaged' Apartment Kitchen

BRIDGEPORT, Conn.—The kitchen in a package, complete in every respect from cooking to refrigeration equipment, and ready to install as a unit, finds its newest and most highly engineered expression in a series of seven new packaged apartment house kitchens that have just been presented by the appliance and merchandise department of the General Electric Co.

The 42-inch kitchen has a G-E hotplate for cooking, the other six sizes include electric range equipment; all provide for electric refrigeration, sink, and cabinet space in varying amounts.

SPOT WELDING EMPLOYED

Steel parts of the cabinets have been carefully formed and electrically spot-welded to provide a rigid, solid structure. Gusset plates have been welded to the base cabinet corners for increased rigidity. Doors and drawer fronts are of flush, double-wall construction, $\frac{1}{8}$ inch thick, with sound absorbent insulation, thus preventing the "tinniness" that is often characteristic of all-steel cabinet work. Doors and drawers close against rubber bumpers, and drawer interiors are free of exposed flange edges.

Sink cabinet of the smallest of the seven packaged kitchens has a minimum bottom shelf area of 2.8 sq. ft. Below its 6-inch louver panel is a cutlery drawer with one com-

partment on either side, to permit space for the sink trap, and two shorter compartments across the front section of the drawer. A sliding bread board is grooved for travel on top of the compartment dividers.

CABINET IS BACKLESS

The cabinet has no back, so that free access to the utility services is provided. The sink counter is of 16-gauge steel covered with $\frac{1}{8}$ inch battleship linoleum surface. The stainless steel trim mouldings permit the linoleum to be replaced in future if desired. The moulding around the sink bowl is an extruded section that also permits linoleum replacement. The bowl, measuring 16 by 20 inches, is of formed steel with an acid-resisting porcelain enamel finish. The $3\frac{1}{2}$ -inch outlet is provided with a chromium plated crumb cup strainer.

The back panel of this smallest model is of 18-gauge furniture steel and is supported by furring strips at least $\frac{1}{4}$ inch from the wall. This panel extends 3 inches above the bottom of the wall cabinets and $1\frac{1}{2}$ inches below the counter, thus tying the assembly together in a single piece. The end panels are fully flanged and lined with a $\frac{1}{4}$ inch asbestos air cell in accordance with local building codes.

The wall cabinet has a minimum of 8.8 cu. ft. with a usable shelf area of $10\frac{1}{2}$ sq. ft. It is equipped with



built-in cup hooks for a dozen cups, and the cabinet bottom is covered on the under side with a steel plate lined with an asbestos air cell.

The larger kitchen models vary in amount of equipment and number of cupboards, but general structural specifications are the same. A drop-door shelf-type bread box is standard equipment. Sink drains in every case have been designed for the installation of a G-E disposall, if that is desired. The faucet assembly is of chrome plated brass. Incidentally, the sink top need not be removed in replacing linoleum.

STANDARD EQUIPMENT

The packaged kitchens are available in seven sizes, classified according to approximate width in inches—42, 62, 77, 83, 87, 96, and 116. The 42-inch model, described above, includes a counter-height General Electric refrigerator beneath the work surface; sink; sink cabinet with cutlery drawer and bread board; and wall cabinet with two doors. The assembly includes the necessary plates and panels, fillers, and soffit trim moulding.

Electric range equipment specified is of the studio type, having three Calrod surface units, two 6-inch units each rated 1,250 watts, and an 8-inch

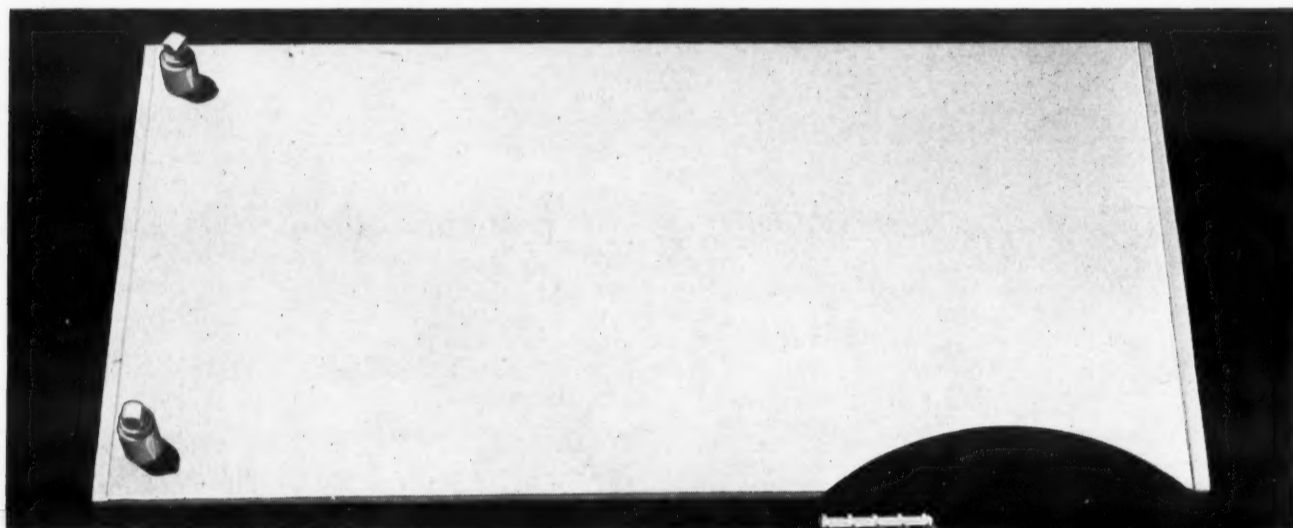
unit rated 2,100 watts. All three offer five different heats, and the Calrod units are of the improved type, hinged to the cooking top and having removable one-piece pans beneath which may be taken out for cleaning when food is spilled. Top of the range is porcelain finish, of one piece with the backsplash, and connected to the sink counter with a moulding.

The switch panel is located on the front of the range, with switch positions marked on white plastic buttons. Other range features are a hydraulic-type oven temperature control; oven pilot light; no-stain vent in oven door to discharge excess vapor and prevent staining of the back wall panel; sliding enamel drip pan with chrome front located under switch panel.

The refrigerator equipment in the four smallest units has a capacity of 2.7 cu. ft., ice capacity of 4 lbs., and shelf area of 6.6 sq. ft. Its cabinet is all steel. Exterior finish is baked Glyptal enamel.

Refrigerator equipment for the 87-inch unit has a capacity of 4.2 cu. ft., ice capacity of 4 lbs., and shelf area of 8.5 sq. ft.; and that of the two largest sizes has a capacity of 6.2 cu. ft., ice capacity of 8 to 12 lbs., and shelf area of 11.7 to 12.2 sq. ft. depending on model selected.

SAVE WEIGHT—SAVE SPACE ...SAVE MONEY!



ZERO PADS REQUIRE ONLY ONE-FOURTH THE USUAL AMOUNT OF REFRIGERANT!

Talk about streamlining—here's a product that has it from S to G! ZERO PADS—the latest Peerless contribution to a tremendous market whooping for better cold plates! Amazingly engineered to banish every last bit of useless weight and space. Incredibly slimmed down—yet more cold-productive, pound for pound!

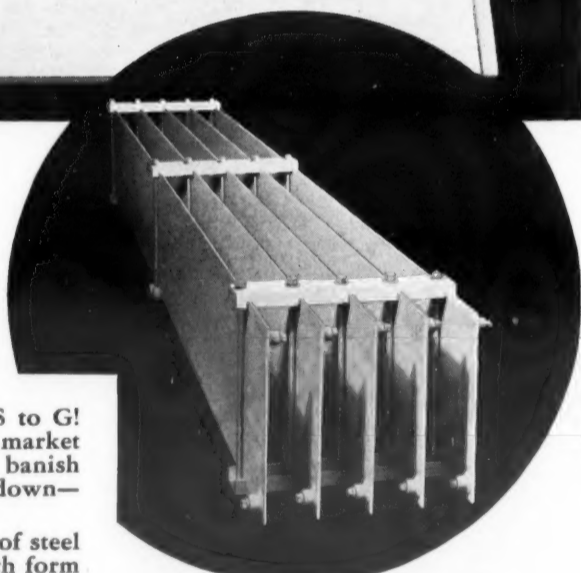
Picture this—the diagrams below will help you. Two sheets of steel pancaked together, enclosing parallel strips of thin steel, which form the walls of the refrigerant circuits. All electrically welded together for lifetime service. Circuits so designed that pressure drop is reduced to barest minimum. No coils to leak, no vacuum needed to hold tubes to a secondary surface. Every inch of a Peerless Zero Pad is prime surface... every inch delivers a full quota of cold!

That's streamlining, we say. So will you, when you see a Zero Pad with all its sleek, slim efficiency.

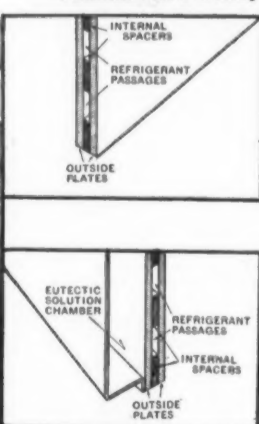
You can use Zero Pads singly, in batteries, or as actual shelves. Their flat, corrosion-proof surfaces are easily cleaned by scraping or brushing, eliminating defrosting shut-downs. Wide variety of standard sizes covers practically every installation need—special sizes if you have to have them.

If there ever was a product with a zooming demand, you have it in Peerless Zero Pads. Locker plants... sharp freeze rooms... beverage coolers... packing plants... soda fountains... refrigerating trucks... all are immediate prospects for this new space-saving, top-flight performer. The swing to Zero Pads is on—cut yourself in for a slice of the profits.

Ask Your Refrigeration Parts Jobber



Today's best bet for LOCKER PLANTS... TRUCKS... SHARP FREEZE ROOMS, etc.



This cross-section shows how formation of refrigerant passages permits extreme plate thinness.

Zero Pads can be supplied with eutectic solution for applications requiring boldover.

Streamlined to thinner than a lead pencil.

Peerless of AMERICA INC.

Midwest Factory, General Offices—515 W. 35th Street, Chicago

NEW YORK FACTORY
43-20 34th Street
Long Island City

PACIFIC COAST FACTORY
3000 South Main St.
Los Angeles, Calif.

SOUTHWEST FACTORY
2218 N. Harwood St.
Dallas, Texas

EXPORT DIVISION
P. O. Box 636
Detroit, Mich.

A PROFITABLE "PACKAGE" ITEM Never Before Available!

Imagine a portable, self-contained, really automatic one-gallon freezer that makes Frosted Malted, soft ice creams, sherbets, ices and frosted fruit drinks! No installation worries. You deliver it—plug it in like a radio.

Here truly is a "package" item right down your alley. In every community, drug stores, confectioneries, restaurants and scores of other stores have been waiting for just such a simple development to come along.

The Tuthill Automatic Freezette gives you the opportunity to get in on the ground floor of the profitable market on an exclusive basis. It will pay you to get the money-making story of the Tuthill Franchise today.

REFRIGERATION PRODUCTS DIVISION
TUTHILL PUMP COMPANY
935 EAST 95TH STREET
CHICAGO, ILLINOIS

DISTRIBUTORS! Wire or write immediately for full particulars.

Super Locker Plant Planned In Virginia

WAYNESBORO, Va. — Construction of a \$20,000 refrigerator locker plant for the Augusta Cooperative Farm Bureau will be started shortly on a seven-acre site on Highway Route 250 near Staunton.

Plans for the building, which were prepared by Daley Craig and Fleming Hurt, Waynesboro architectural firm, call for a one-story structure measuring approximately 50 by 70 feet. Contract for refrigeration was awarded to Catlett & Johnson of Richmond, representing the York Ice Machinery Corp.

The proposed 600 lockers of the plant will be rented by the year to members of the farm bureau and also to the general public, at a cost of from \$5 to \$10.

Lockers will be of various sizes, each having five shelves. All will measure 30 inches in depth. In the front of the plant, under present plans, will be the processing room, a sales room, and an office with adjoining lavatories.

Other Virginia locker plants are at Fredericksburg and Timberville. The plant in the former city is new, while the other was built several years ago in connection with an ice plant.

Theodore Alphin of Waynesboro is chairman of the committee in charge of the new plant. Others on the committee are Charles West of Grottoes, W. H. Wright of Weyers Cave, John East of Churchville, Wallace Trimble of Swoope, and Ray Cline of Staunton.

\$15,000 Plant Will Be Built In Florida

HOMESTEAD, Fla. — A cold storage and pre-cooling plant will be built for the Florida City Farmers Market here, according to Gordon Dill, manager. The plant will cost \$15,000 and will be the only one of its kind in the state, it was said.

It will be a complete food handling establishment for processing fish, poultry, fruit, vegetables, and meat. Several hundred individual lockers will be provided.

Insurance Firm's Building Has Year-Around System

WILMINGTON, Del. — Said to be one of the most modern "zoned" year-around air conditioning systems ever installed in an office building is a feature of the new Continental American Life Insurance Co. building just opened on Rodney Sq. here.

Automatically regulated to control temperatures separately in different parts of the building, the system is powered by a 100-ton refrigerating compressor.

Low pressure steam and winter air conditioning ventilating system, with a three-zone temperature regulation, have been provided. Direct ventilation and exhaust for all toilet rooms, the president's office, board room and library on the third floor, and lounges and kitchenette in the basement are included in the system.

The building, of granite, limestone, and green marble, is five stories high. The insurance company will occupy the working space in the basement, the greater part of the first floor, the entire second floor, and part of the third. The remainder of the building will be rented for office space.

New Home To Have Basement Cooler

VANCOUVER, Wash. — Feature of the \$15,000 home to be constructed near here by C. L. Humphrey for Nils M. Troland of Portland, Ore. is the basement walk-in cooler provided with a quick-freezing chamber for freezing and storing fruits, vegetables, and meats.

Church Seeks Cooling

FORT WORTH, Tex. — Contract for air conditioning a building for the Central Freight Line has been awarded Baker Ice Machine Co. of this city.

Central and South American Buying Is Growing

WASHINGTON, D. C. — Exports of household refrigerators during July totaled 7,585 units, valued at \$584,177, according to statistics compiled by the Bureau of Foreign and Domestic Commerce.

Foreign shipments of commercial refrigerators during the month amounted to 882 units, with a value of \$96,278; while refrigerator parts shipments totaled \$373,176 and shipments of air conditioners and parts \$40,248.

Canada continued to be the best all-around customer of U. S. refrigeration and air conditioning firms, shipments to that country during July totaling \$248,246. Included in shipments were 1,522 household refrigerators valued at \$89,748; 148 commercial units valued at \$15,155; \$140,991 in refrigerator parts; and \$2,316 in air conditioners and parts.

Second best foreign customer in July was Argentina, with shipments to that country including 614 household units valued at \$30,482; 100 commercial units valued at \$5,925; and \$73,008 in refrigerator parts. South Africa was third in the general list and second only to Canada in household refrigerator purchases, with 1,057 units valued at \$82,869.

High on the commercial refrigeration roster for the month were Puerto Rico, with 93 units valued at \$10,551; Venezuela, with 85 units valued at \$11,405; and Mexico, with 73 units valued at \$9,611.

Trailing Canada and Argentina in the refrigerator parts classification were United Kingdom, with \$40,678, New Zealand with \$14,734, and Australia with \$12,852. British India and British Malaya ranked one-two in the air conditioners and parts class, with imports from this country valued at \$11,596 and \$5,171, respectively.

N. Y. Service Engineers To Meet In November

ALBANY, N. Y. — The first convention of the New York State Association of Refrigeration Service Engineers will be held in Albany, Nov. 29-30, it was announced by John Bush, president of the new association.

Albany was selected for the convention at a conference between Mr. Bush and George B. Gardner of Schenectady, secretary of the state association. Mr. Gardner will act as general chairman of the convention. Ernest E. Condon of Flushing, L. I. will be educational chairman, and Eugene E. Phillips of Rockaway Beach, entertainment chairman. Ralph Davis and Mr. Bush, both of Buffalo, are in charge of publicity.

Mr. Bush said a program for the convention has been drawn up and is now being approved. The state convocation will be a miniature of the international convention, with exhibits, speakers, a banquet, and a get-together dinner on the program.

Georgia Power Salesmen To 'Audition' Sales Talks

ATLANTA — Taking a leaf from the recently completed Westinghouse national sales presentation auditions, H. A. Smeeton, director of dealer coordination for Georgia Power Co., has announced an audition contest for all dealers and salesmen in the company's territory on electric ranges, with a total of \$465 in prizes for the winners.

The contest will run through October and November, and salesmen may make their sales talks on any brand electric ranges they sell. Divisional prizes of \$25, \$17.50, and \$10 are offered, in addition to grand prizes of \$75, \$50, and \$25 for the best three presentations in the entire contest.

To promote range sales during the competition, Georgia Power has scheduled a series of range-water heater cooperative advertisements to run during October and November.

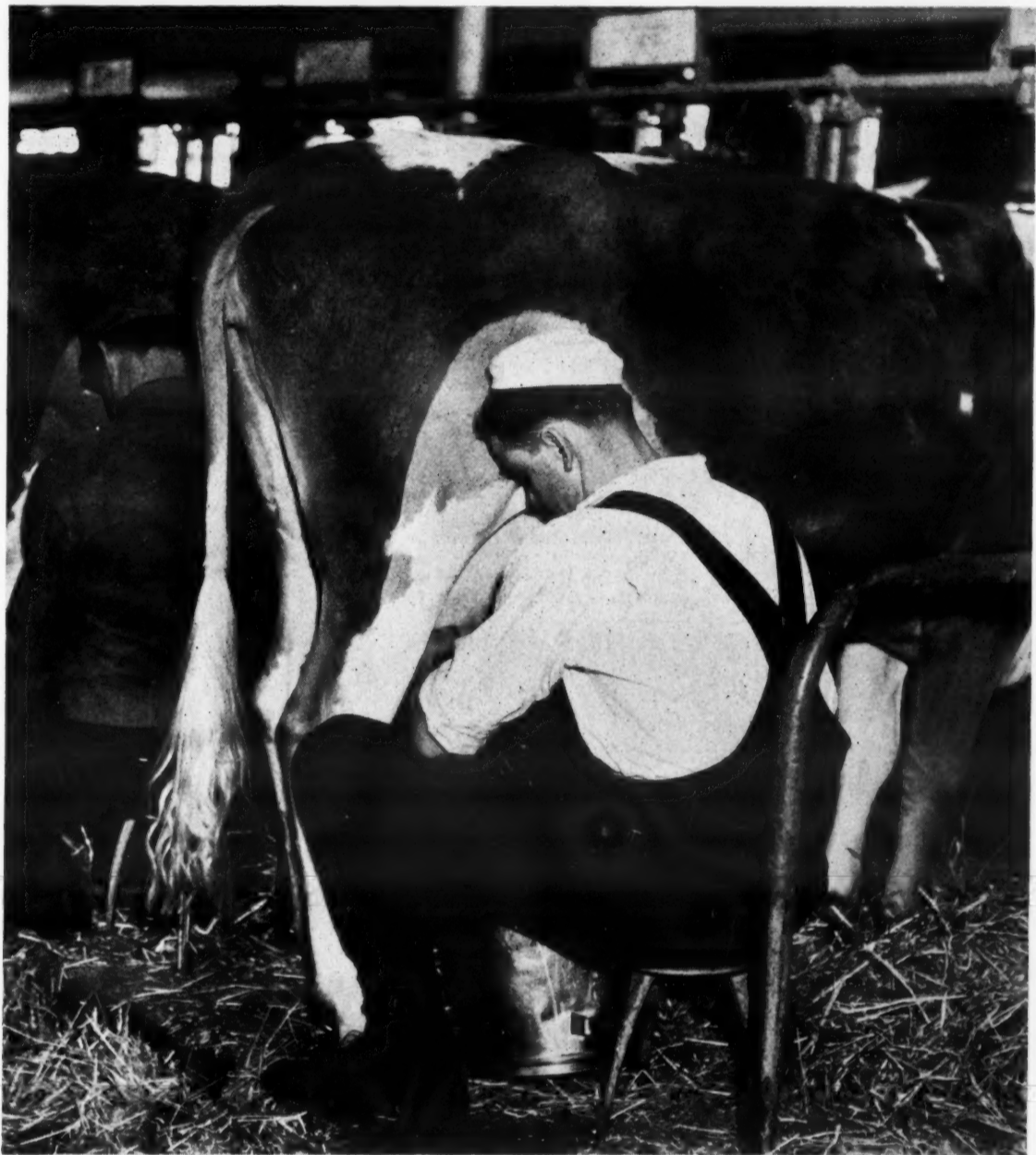
York Gets Pasadena Job

PASADENA, Calif. — York Ice Machinery Corp. has been awarded a contract to install a refrigeration system costing \$39,200 in the new Pasadena Winter Gardens.

When Business Is Good, The Boys Go Fishing

GOLDSBORO, N. C. — H. C. Hodge, manager of Hub Hardware here, has a unique and enjoyable means of stimulating his firm's appliance salesmen to greater effort. Every time 100 major appliances have been sold, Manager Hodge locks up shop and takes all the boys on a fishing trip. On the last junket, 45 Amer Jack and Dolphin were landed.

Country	Household Refrigerators No.	Household Refrigerators Value	Commercial Refrigerators No.	Commercial Refrigerators Value	Refrigerator Parts Value	Air Conditioners and Parts Value
Canada	1,522	\$89,784	148	\$15,155	\$140,991	\$ 2,316
Mexico	516	51,700	73	9,611	...	...
Cuba	749	60,851	75	7,193	...	...
Argentina	614	30,482	100	5,925	73,008	...
Brazil	386	31,175	...	...	...	...
Venezuela	504	50,339	85	11,405	...	...
South Africa	1,057	82,869	...	...	10,933	...
Hawaii	647	63,967	129	21,611	13,448	2,697
United Kingdom	...	...	...	...	40,678	...
British India	...	...	...	...	11,596	...
British Malaya	...	...	...	...	5,171	...

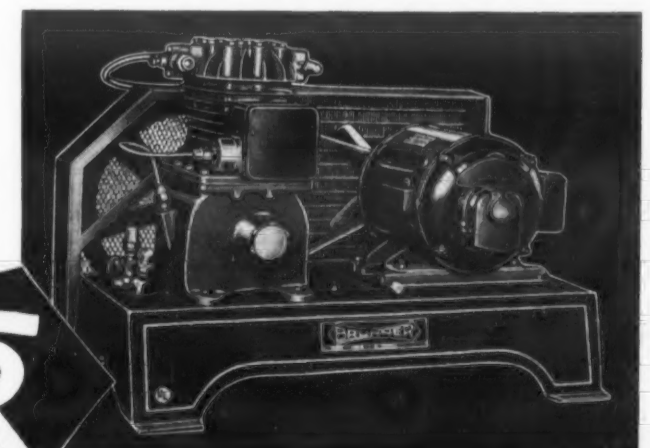


...and it won't lose one iota of its freshness — THANKS TO BRUNNER

Yes!—Mrs. Housewife's extra criticalness about freshness when she buys milk products is your opportunity for successful merchandising of refrigerated display cases and coolers to merchants... especially if a Brunner unit provides the refrigeration. Brunner's outstanding dependability has a strong appeal to merchants. It means extra profits by reducing spoilage through continuous, efficient refrigeration. Besides, thanks to Brunner, you give Mrs. Housewife "cow-fresh" milk products because Brunner Commercial refrigeration sees to it that they won't lose one iota of their freshness.

perfect alignment of all moving parts, motor with integral overload protection, over-sized condensers, large fin surface, silent eccentric drive,—these are just a few of the extras Brunner engineers build into every Brunner Commercial Refrigeration and Air Conditioning unit, all of which assure top-flight efficiency. And to make your guarantee "stick", each Brunner unit carries the Underwriters' Laboratories approval and U. L. Seal. Brunner Refrigeration and Air Conditioning Units are available from 1/4 to 25 tons of refrigeration. Write for full details. Brunner Manufacturing Company, Utica, N. Y., U. S. A.

Designed and engineered by commercial refrigeration experts with over a third of a century of experience, Brunner Commercial Refrigeration units are precision built for endurance, dependability and low-operating cost. Special bronze bearings, large rugged castings,



BRUNNER

FOR YEARS THE SYMBOL OF QUALITY

Tire Distributor Finds Appliance Business Yields More Profit Per Dollar Invested

San Francisco Firm Bridges Slack Tire Season By Urging Dealers To Plug Appliance Sales

SAN FRANCISCO—A tire distributorship which has ventured into the electrical appliance business and found the sale of this type of merchandise more profitable—in proportion to the floor space, sales effort, and investment involved—than the sale of tires themselves is the Mark Morris Tire Co., distributor here for U.S. Tires.

"Because of rapidly changing business conditions, and the increasing pressure of competition," reports G. A. Stoff, manager of the Mark Morris firm, "product diversification has become absolutely essential to the conduct of a successful tire business. It lengthens the merchandising season, creates wider buying appeal, and capitalizes on customer contacts.

"These factors combine to effect an increase in the average sale per customer, and this in turn has the effect of decreasing the percentage of sales cost for every dollar's worth of merchandise sold. Actually these supplementary lines tip the scales during the winter months, enabling a tire company to show a profit, in place of the usual loss.

"The home appliance field," he says, "has been found by many tire companies to be the most logical and

profitable solution to the problem of diversification." The Mark Morris company handles Crosley refrigerators, Chambers electric ranges, Thor washers, Philco and Motorola radios, and several lines of vacuum cleaners, in addition to a number of smaller appliances.

Key figures in the Mark Morris system of appliance merchandising are the company's "neighborhood"



R. C. SCHWALB, appliance manager of Mark Morris Tire Co.

tire dealers. These dealers, Mr. Stoff explains, are always in a very favorable position to maintain intimate contact with tire customers in their own localities. As a result, they often can pick up valuable leads on appliance sales as well.

By encouraging such friendly contact, and by making it possible for the dealer to cash in on any appliance business brought in, the tire distributorship has increased its appliance sales until the business coming from dealers now amounts to about 15% of the firm's total appliance volume.

From the dealers' standpoint the profits from this appliance business represent extra "gravity" obtained without any special sales effort, without any sales expense, and without having to finance any transactions.

LITTLE EXTRA EFFORT

The distributor, too, expends little extra sales effort or expense on this type of business, and at the same time promotes a more friendly relationship with its dealers by virtue of the dealers' added profits.

Main appliance sales room of the Mark Morris organization is combined with the company's waiting room. This proves an advantage, Mr. Stoff points out, inasmuch as tire customers are induced to examine the displays at their leisure while waiting for their tires to be serviced. All merchandise is clearly priced. There are no floor salesmen, but any customer desiring further information on the merchandise displayed is handled by Office Manager Robert C. Schwalb, who also acts as appliance manager.

The company's outside salesmen are trained to plug appliances all the time they are soliciting their regular tire business. Likewise, any direct-mail advertising that goes out on tires also carries some reference to appliances too.

DELIVERY NO PROBLEM

Delivery of small appliances that require no installation or servicing is handled by the regular tire men while on their customary delivery routes. Delivery, installation, and service of major appliances, however, is handled by two outside men. For a stipulated flat sum these men will pick up a piece of merchandise, deliver it to the customer, install it, and service it during the usual free-service period. On refrigerators, the charge for all this work is only \$6.

Financing of appliance sales is handled just like the financing of tire sales. Credit losses on appliances, Mr. Stoff reports, are less than those on tires, because the intrinsic value of replevined merchandise is generally higher, and resale value is correspondingly high.

Appliance stock which the company keeps on hand is limited to display merchandise. Most customer deliveries are made direct from the jobber's warehouse. This policy serves the two-fold purpose of reducing the Mark Morris company's stock investment and increasing its turnover.

G-E Stages Its Own 'Political' Campaign To Promote Ranges and Water Heaters

BRIDGEPORT, Conn. — A red-white-and-blue electioneering campaign, decorated with all of the props and devices of a national political drive and offering "liberal rewards and a secure office tenure," has been launched in behalf of General Electric ranges and water heaters to intensify distributor sales efforts on these major appliances during the fall months. The campaign bandwagon is scheduled to roll at full tilt from Sept. 16 through midnight on Nov. 16.

Spearhead of the campaign is the new "Statesman," electric range, released some four months ahead of the regular 1941 line, but the drive will include the entire 1940 line of G-E ranges and water heaters.

With apparent disregard for moral niceties, campaign literature urges distributor salesmen to "vote early and vote often." Distributors have been divided into three parties, each with appropriate insignia, and each party consisting of distributors having quotas of comparable size.

Stumping For Sales



J. R. POTEAT, G-E range manager, "takes the stump" atop a range to touch off the company's "election campaign."

Object of the campaign will be to elect a president, vice president, secretary of state, three associate justices, four senators for each party, five representatives for each party, and approximately 25 committeemen.

Enough elective offices will be on the ballot to assure every participant of winning something in the way of a title. All of the latter are desirable with one exception—this distributor receiving the fewest number of votes in G-E's election will fill the post of "federal doghouse authority."

Distributor sales promotion managers will act as campaign managers, with each 1% of quota realization counting as 1,000 votes. Prizes for distributors will consist of an award of an "Imperial" deluxe six-unit range to the "president"; 17 other ranges and a number of electric kettles and time-chime clock accessories for the other winners down the scale.

Promotional helps include prepared direct-mail campaigns, recipe books, window displays, local newspaper advertising, and a 24-sheet poster. A special display and wholesale plan, coordinated with the campaign, is being offered by the G-E Contracts Corp., to augment dealers' stocks for the drive.

The policy and platform governing the campaign derives its language from the national political scene. The "No Foreign Entanglements" plank declares: "Our business is a domestic business—we stand on the principle of better conditions in the home. No foreign fumes and dirt in the air of the kitchen which elects our equipment. We will not allow our American women to fight foreign soil, produced by old-fashioned stoves and water heaters. We will keep our boys at home because they enjoy electric cooking and the healthful atmosphere of the electric home.

"We pledge our time, our manpower, our money, our minds to this united effort. We will do everything we can, not to electrify the world, but to electrify the kitchen."

Eureka Launches First Drive Using Dealers

(Concluded from Page 1, Column 3)

Backing up the drive will be a strong promotional campaign, including newspaper advertisements, special window trim and posters, consumer dodgers, and cooperative advertising layouts and mats. Advertisements feature the "birthday special" as "a \$55.70 value for \$35.88 and your old cleaner."

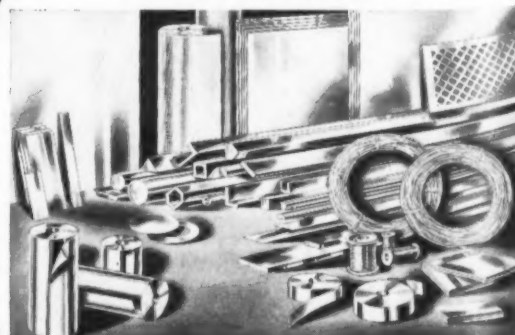
Special payment terms also may be offered by dealers in connection with the featured products, and cooperative advertisements play up the offer of "free home demonstrations." Alternate offer mentioned in one advertisement is a set of cleaner attachments, instead of the coffee-maker set, at the special price.

Newspaper mats are designed for tie-in with larger factory-paid announcements, stressing the "here's where you can buy it" angle. Special window trim is spot gummed ready for attachment, and each folder includes a recommended diagram for maximum display effectiveness.

Although designed especially to attract September business, the campaign may be continued throughout the fall months.

Heating, Piping and Air Conditioning craftsmen everywhere prefer to work with genuine Hussey Pure Lake Copper because it readily shapes and conforms to the most difficult fabricating jobs—a quality peculiar to Pure Lake Copper only. It is one of the several outstanding properties which have made Hussey Pure Lake Copper famous for nearly a century—why it will pay you to specify and use Hussey Pure Lake Copper on your equipment.

C. G. HUSSEY & CO.
(Division of Copper Range Co.)
Rolling Mills and General Offices: Pittsburgh, Pa.
Warehouses in Principal Cities



it's "TOPS" FOR WORKABILITY
Copper **HUSSEY** Brass

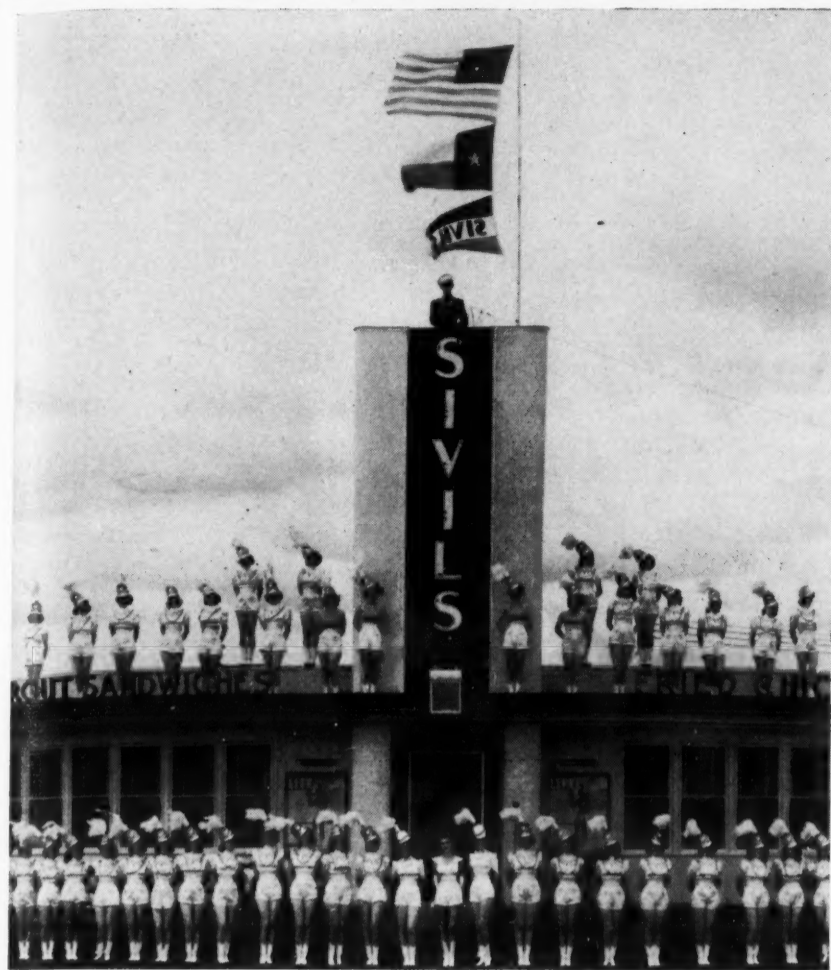
If Tubing is a Part of Your Product Let Bundy Help You!



Bundy's complete engineering and research facilities are at your disposal. There is no obligation.

BUNDY TUBING
DETROIT

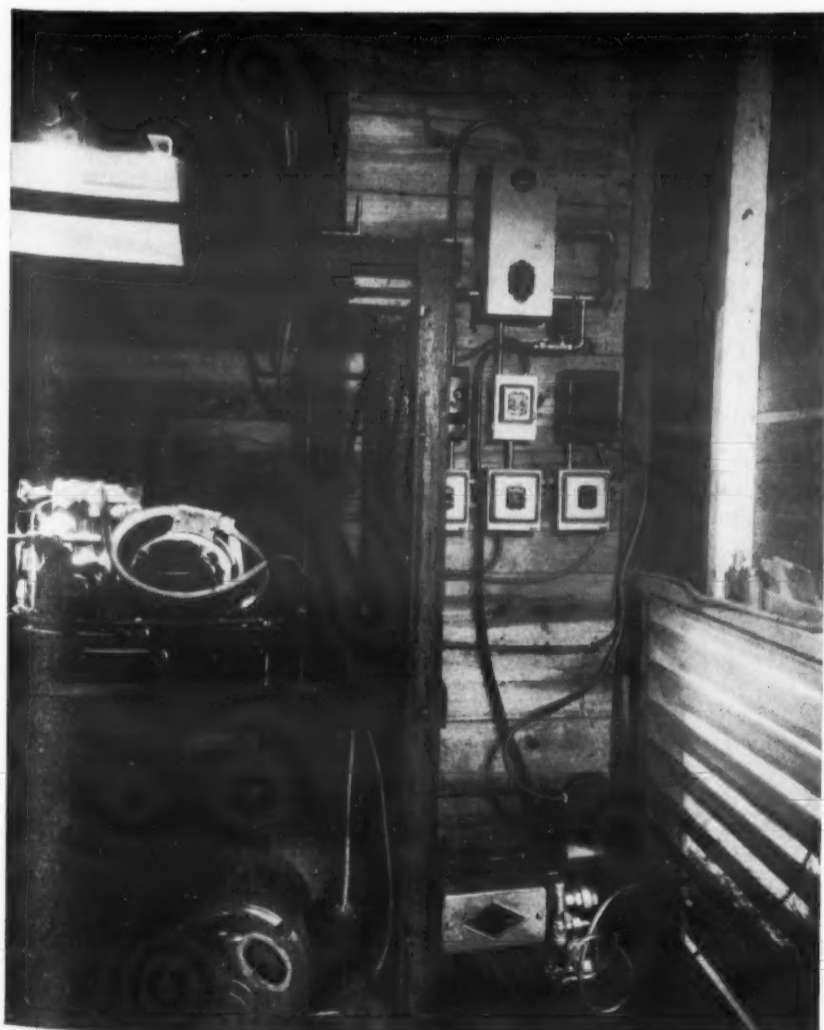
Jobs Worth Inspecting If You Ever Get To Texas



Some of the 90 attractive and well-drilled girls who serve drive-in customers at the Dallas, Tex. unit of the Sivils drive-in restaurant group line up at the front of the establishment. Man on the tower holds a microphone by means of which he directs the service.



Texans like their beer cold, so bottled beer is pre-cooled in this big service cooler, cooled by a Peerless cooler. The "yes" sign means that the beer has been in long enough and is ready to be taken to the dispensing beverage cooler for final chilling.



The less room for service facilities, the more room for customer's cars, so the Sivils establishment is compactly constructed. Notice how the compressors here are installed in tiers, and the ventilated partition.

Pretty Legs and Refrigeration Do the Big Jobs For 'Outdoor Taverns' In Texas

Famed Sivils Chain In Texas Needs Fast Cooling Units —They Heat 'Em Up, Then Cool 'Em Off

DALLAS, Tex.—The Sivils chain of outdoor-service taverns in Texas metropolitan centers has achieved fame chiefly for the winsome lasses in abbreviated costume who serve the customers at the direction of an announcer who sits on a high tower. But the latest unit of this chain in Dallas is worthy of fame in the refrigeration business because of the manner in which it is equipped.

The girls who do the serving, in their shorts and plumed parade hats, have gained nation-wide attention through pictures in Life magazine and also because their costume has been copied for advertisements of a large cigarette company.

Here's some data on the Dallas establishment, refrigeration and otherwise:

BIG LOAD ON BEVERAGES

Fourteen hundred cases of beer and 700 cases of Coca-Cola served weekly, all cooled in a pre-cooling vault held at 40° F.

"Yes" and "No" signs hung on piles of the beer and Coca-Cola tell whether certain piles have been cooled down enough to be removed to one of two 50-case service boxes,

now cooled with ice, but which will probably get mechanical refrigeration in the near future.

A quick-freeze room, 8 feet square.

A double row soda fountain and dispensing section, including two ice cream cabinets with a total capacity of 60 gallons.

Two commercial refrigerators in the short order section.

Kelvinator compressors mounted in tiers in a special compressor room, in order to save space. The chill room is operated from a 5-hp. compressor, the freezer room by a 1½-hp. unit, and the other equipment by smaller units.

COIL EQUIPMENT

Peerless coils are used, a Model T-241 unit in the beer pre-cooler, and a Model T-165 LT in the frozen storage room, with a W-1 "frost buster." Peerless valves are used throughout the installation.

Installation was made by the Air-Rite Corp., Kelvinator commercial refrigeration distributor in Dallas.

And some general facts about the Dallas Sivils setup:

More than ninety girls are employed to serve the cars.

An announcer atop the building directs the "car-hops" by means of a public-address system, to serve the cars in the numbered and sectioned three-acre parking lot. (Not long ago a privately owned airplane landed on the lot and obtained "curbstone" service.)

The building is so arranged that all food orders are placed through entrances at either side of the building, while the beer patron is served through the front entrance exclusively.

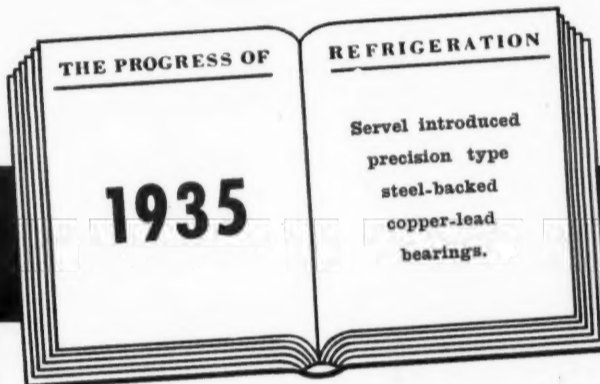
There is no air conditioning in the establishment at the present time, although the proprietor has given some thought to it. Exhaust ventilating ducts for the service rooms and kitchens have been "furred in" so that they could be used with an air conditioning system.

At the front, or fountain room, there is seating capacity at counters and booths for 40 persons. A space has been provided in the paneled walls of these rooms in which store coolers might easily be installed.

UNUSUAL BEER BOX

Construction of the beer pre-cooler box is somewhat unusual. The box measures 16 by 18 feet, and has a 10-foot ceiling. Walls are of ¾-inch tongue and grooved siding material, insulation between the walls consisting of 7½-inches of Palco wool (11 inches in the ceiling).

Outer walls have been covered with shiplap, with 4-inch studding thereon furnishing a base for the outside covering of redwood, of which the plant is built.



There Is No Substitute For Experience

NOW—NEW 3 AND 5 H. P. MODELS FOR SERVEL'S SILVER FLEET

HERE are the industry's new leaders in the 3 and 5 H. P. field—Servel's advanced "WT" series!

These units give the Servel distributor outstanding models for locker storage refrigeration—for product cooling in dairies, bottling plants, abattoirs, etc.

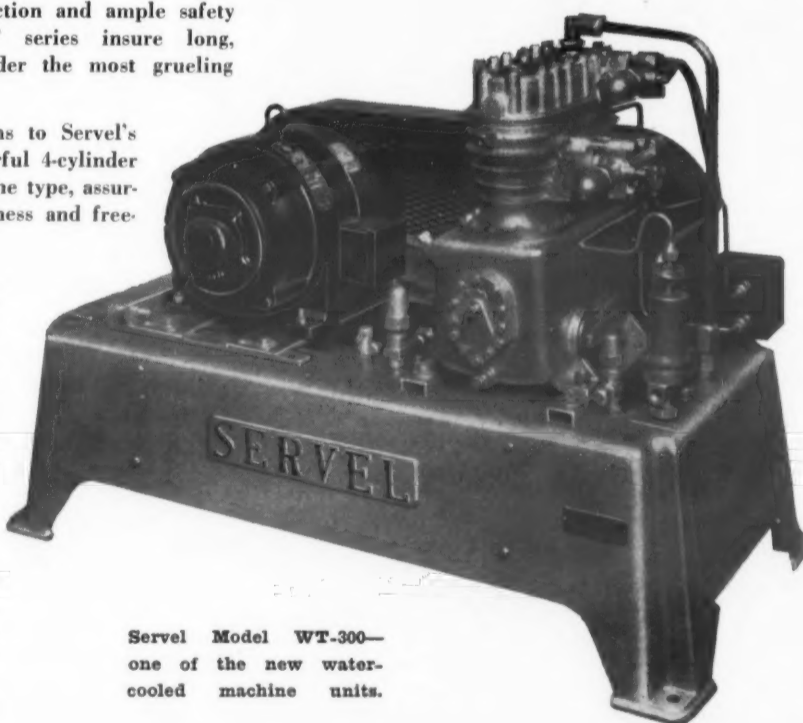
The rugged construction and ample safety factors of the "WT" series insure long, dependable service under the most grueling conditions.

These latest additions to Servel's Silver Fleet have powerful 4-cylinder compressors of the in-line type, assuring exceptional smoothness and freedom from vibration.

The multiple shell-and-tube condensers provide true counter-flow operation, yet reduce water resistance to a minimum if used on recirculating cooling towers.

The release of these new models is further evidence of Servel's far-seeing, progressive policy of continuously expanding and improving its products to broaden the distributor's field of operation.

Servel's full line from ½ H. P. to 20 H. P. insures good volume even in the "slack" season. If you want to know what the Silver Fleet can do for your business, write today for full details. Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Indiana.



Servel Model WT-300—one of the new water-cooled machine units.

SERVEL

COMMERCIAL REFRIGERATION AND AIR CONDITIONING

Coil Springs Absorb Vibration In 2nd Floor Compressor Mounting

LOUISVILLE, Ky.—Coil springs supporting heavy concrete compressor mountings were used to absorb vibration from three Carrier 50-ton compressors installed on the second floor of a new Woolworth store by the Brandeis Machinery & Supply Co. here. This method was selected because the machines were located directly over the main sales floor where sound and vibration elimination had to be guaranteed.

The three compressors, each powered by a 60-hp. Century motor, were mounted on a reinforced concrete base which was floated on special coil springs at the sides and corners. The base is 10 inches thick and has floor clearance of 2 inches.

The combined weight of the base and refrigeration machines is approximately 15 tons, yet by means of spring adjustments and careful distribution of weight, vibration absorption is obtained.

Engineers designing the system claim that satisfactory results are dependent on the construction and tempering of the springs used. These coils are designed with the view of obtaining the right degree of resilience in direct ratio to the weight supported, thereby providing for counteracting swing caused by synchronizing motion.

The balance obtained is still delicate enough to respond easily to the pressure of a man's foot.

Regulation flexible couplings in refrigerant lines from the compressors eliminate the transmission of compressor vibration through these lines.

Arrangement of the coil springs provides the same support as if the base were divided into three separate parts—with a coil at each corner, thereby placing two pair of coils equidistant from each other and from the corners on each long side.

Coils placed in pairs are tied together by one continuous support bracket, thus providing additional protection against strain between the units.

Individual blocks are provided as coil bases, through which pass adjustment studs from the concrete floor to the top of the coil springs.

Each of the three compressors operates at 50% or full capacity, depending on load conditions. Control of the compressors is from water temperature, the load being picked up in multiples of 25 tons.

The system is started in the morning and stopped at night by a manual control button.

Utility Cools Branch Office

DALLAS, Tex.—Installation of a 30-ton Westinghouse air conditioning plant in the Oak Cliff branch of the Dallas Power & Light Co. has been completed by Pines-Natkin Co.

Feminine Keglers Like It Cool

Conditioning Ups Summer Bowling Business 50%

BIRMINGHAM, Ala.—Air conditioning has stepped up the feminine patronage of the Phoenix Bowling Center here almost 50%, according to Harry M. Arnold, proprietor. A 30-ton Carrier installation was made in this establishment recently by Shook & Fletcher Supply Co.

"Bowling as a game has been growing by leaps and bounds, until it almost rivals baseball as a national sport," said Mr. Arnold. "It appeals to both men and women. However, it is a rather strenuous game, and so heretofore business has fallen off in the summer time. Women particularly could not play without soiling their clothes with perspiration."

"With air conditioning, the picture is different. Both men and women can play in their street clothes without becoming soaked with perspiration. The number of women bowling has increased 50%, and our masculine trade has also shown an increase. Customers stay longer and play more games."

Mr. Arnold said that air conditioning has also aided him in competition with the theaters, swimming pools, and other summer amusement resorts. His alleys are located in the basement of a building where the ventilation would be poor except for the air conditioning.

Three Good Reasons

Lyn Knapp, Ann Hinkle, and this Lipman 5-ton store cooling unit are three good reasons why the Hotel Doherty Snack Bar at Clare, Mich., does a thriving summer business. The unit was installed by C. H. Earl of Bay City, Mich. Other public rooms in the hotel are cooled by a well-water system.



U. of M. Offering Extension Course In Conditioning

DETROIT—Three courses of interest to the air conditioning industry will be offered by the University of Michigan Extension Service here this fall. A non-credit course in air conditioning design and equipment selection will be given by Prof. Floyd N. Calhoun for a period of 16 weeks, beginning Monday evening, Sept. 23, at Northern High School.

Other directly related courses are "Building V," covering the mechanical trades in building construction, offered by Mr. Cuthbert, and Chemical Engineering 113. Information may be obtained from the Detroit office of the University Extension Service, 40 East Ferry Ave., Detroit.

Curtis Leases Office

NEW ORLEANS—Curtis Air Conditioning Co. has leased space for sales offices and warehouse at 748 Baronne St. here.

Lack of Room Coolers Stops Dealer Sales In Calcutta, India

CALCUTTA, India—With dealers' stocks of portable room coolers exhausted, the demand for this equipment continues to be high, according to reports issued by the American Consulate here. Because of disrupted shipping schedules manufacturers have been unable to meet delivery dates on air conditioning equipment.

Air conditioning is making consistent progress, however, in many parts of the country. Executive offices of many of India's leading commercial houses are now artificially air cooled as are a number of government departments in Calcutta.

The leading railroad companies have installed cooling equipment on many of their long distance routes and traveling in air conditioned coaches is becoming increasingly popular.

It is reported that Bombay cotton mills have expended approximately 5,000,000 rupees, (about \$1,500,000) in the past years for process air conditioning equipment.

Use these FED-R-LUXE UNIT COOLERS

and INCREASE YOUR PROFITS
through added SALES BECAUSE..

PURE, CHINA WHITE baked-on, easy-to-clean, enamel finish reflects cleanliness as well as beauty.

NON-TARNISHING TRIM adds brilliance and sparkle to every Fed-R-Luxe installation.

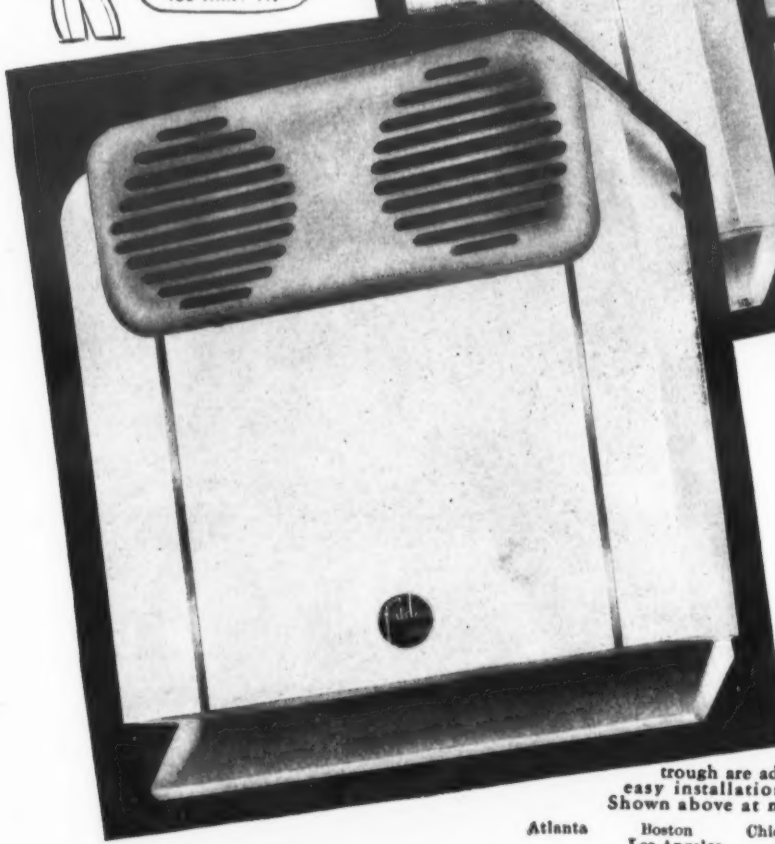
FEDDERS HIGH EFFICIENCY FINNED COOLING ELEMENT is correctly proportioned to maintain ideal conditions of relative humidity.

SELF CONTAINED in rugged cabinet.

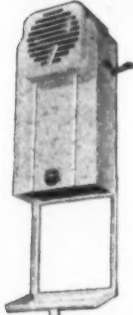
COMPLETE LINE of Single and Twin Models for wide range of sizes and capacities.



ORDER YOUR SUPPLIES TODAY FROM YOUR FEDDERS WHOLESALE. HE CARRIES A STOCK OF FEDDERS PRODUCTS AND WILL GIVE YOU WHAT YOU WANT WHEN YOU WANT IT.



ADJUSTABLE TROUGH



Both angle and height of drain trough are adjustable and provide easy installation between shelves. Shown above at maximum extension.

QUICK, EASY ACCESSIBILITY

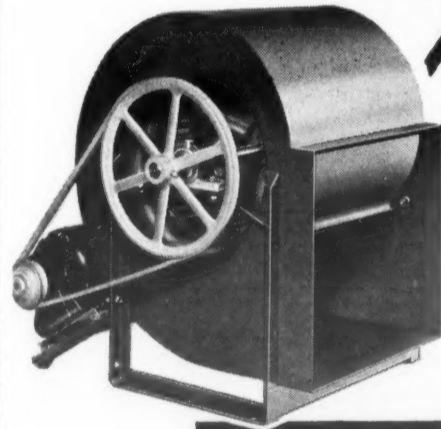
Oiling motor or adjusting Thermostatic Expansion Valve is made easy by simply raising grille—a special Fedders convenience feature.

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MANUFACTURING CO., INC.

Atlanta Boston Chicago Cincinnati Dallas Detroit New York
Los Angeles Philadelphia St. Louis Hamilton, Ont.

The DEPENDABLE Complete ASSEMBLY

for
Air Conditioning
Jobs



You Assure Customer Satisfaction
with LAU Equipment

Lau Blower Assemblies included in your air conditioning units can be depended on to assure no kick-backs and practically no service calls as far as the blower is concerned. Greater customer satisfaction naturally follows.

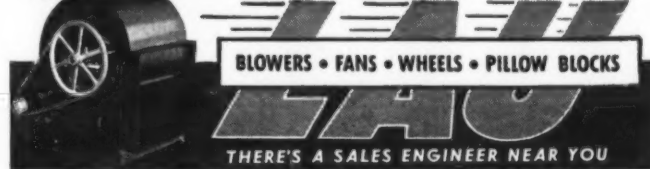
Every year we ship to builders of air conditioning units thousands of Lau wheels and assemblies.

This smaller equipment is designed with the same skill characteristic of the larger Lau Blowers . . . and just as carefully fabricated and tested.

There are sizes of Lau Blower Assemblies to meet every requirement. The next time you specify, join the swing to Lau. You can depend on Lau to meet your every specification.

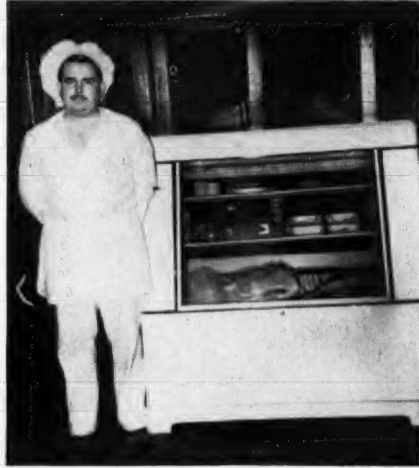
Write

or wire for our catalog and complete details today.



Lau Blower Co., 2016 Home Ave., Dayton, Ohio

Food, Flowers, and Pretty Girls All Benefit From Cooling In a Night Club



Gayle Reynolds (left) and "Quita" (right), dancers, like the two 5-ton Carrier units used for "spot" cooling in Lowell Bernhardt's Blue Lantern Club in Detroit. Chef Al Hayes lets the customers choose their own steaks from this Puffer-Hubbard display case and "Little Skippy" Little, the singing flower girl, keeps corsages fresh in a second 4-foot display case. Two large reach-in refrigerators are used in the kitchen.

West Coast Dealer Finds Good Market In Small Dairy Jobs

SAN FRANCISCO—Installation of milk cooling equipment in dairy farms in this territory has constituted an important phase of this year's commercial refrigeration business for Marine Electric Co., Servel commercial distributor here.

All of the installations are direct expansion jobs, reports Paul H. Holstein, manager of the company's electric refrigeration division, and range in size from $\frac{1}{4}$ to 5 hp. In each case the complete job, including coils and electrical requirements, was furnished by the company.

In the Alps Dairy, operated by the Morris Schrieber Farm, the company installed a 5-hp. Servel water-cooled machine and a model HC-74B Humidraft, in addition to coils and accessory equipment.

Another installation was at Garner's Lakeside Dairy, located near Lower Lake, Calif. This job included a $\frac{1}{4}$ -hp. Servel machine unit and complete aeration equipment.

Other dairy jobs included a 3-hp. "WQ" water-cooled Servel unit and HC-74B Humidraft, together with coil and aeration equipment, at the dairy operated by Azevedo Bros. near Sacramento, Calif.; and a 3-hp. water-cooled machine unit and HC-49B Humidraft for the Alpine Dairy, operated by John Schrieber & Sons at Nicolaus, Calif.

Changes In Counter Freezer Industry Open New Opportunities For Dealers

Product Now Easier 'To Talk About' and To Install

By H. T. Kessler, Vice President, Tuthill Pump Co.

Depression years gave birth to the counter freezer industry. It has had a gradual growth during the past 12 years and is still an infant in volume measured by the production of other refrigerated specialty products. In the opinion of the responsible manufacturers, it will continue to show a healthy increase in sales.

In early years, it was necessary for the manufacturer to train salesmen in the proper operation of the equipment as well as provide him with a knowledge of the products which could be made, including ice cream, sherbets, ices, frozen custards, and in more recent years, malted milk drinks that "you eat with a spoon." Frosted fruit drinks, and scores of frozen specialties.

Because of the need for trained men, who in turn, could properly instruct the retail buyer, a large proportion of counter freezer sales has been made by direct factory salesmen.

ADVICE NO LONGER NEEDED

While there are some counter freezer owners who prepare their own formulas and make their own mix, the great majority buy mix from their local dairy or ice cream manufacturer, or have it shipped from a mix manufacturer in their vicinity. Prepared mix is now available in every small town and city in this country. Salesmen of mix manufacturers have supplemented the instructions of the counter freezer salesman so that the owner of a counter freezer is no longer dependent on the advice and information of the salesman from whom he purchased the freezer. Weekly and monthly periodicals bring to the operator of a counter freezer current data and formulas that were not available in the first few years.

It is not the intention of this review to deprecate the knowledge of the experienced freezer salesman, but to point out that much of the information which he alone had through factory training is now brought to the operator from many sources.

Today counter freezers are sold through refrigeration distributors, dealers, and specialty selling organizations; also by direct factory salesmen. A few small manufacturers use both methods for securing sales.

NON PORTABLE

Until quite recently counter freezers were restricted to two sizes, the 2½ and 5 gallon capacity. There are now on the market 2 quart; 1 gallon; 6 quart; 2 gallon; 2½ gallon; and 5 gallon units which come under the classification of counter freezers. The larger capacity freezers are referred to as commercial freezers.

The first self-contained, portable type freezer was introduced three years ago. Since that time, several manufacturers have produced a package freezer which is self-contained, portable, and automatic. Not until this year was the first fully automatic, portable, self-contained freezer that "plugs in like a radio,"

offered to the public. The introduction of this freezer—a package item—offers the refrigeration distributor and dealer a new opportunity for volume and profit.

Where is the market for this new portable freezer? Analysis of hundreds of sales made this year by distributors and dealers places drug stores, restaurants, ice cream parlors, and chain stores at the top of the list, followed by grocery stores, clubs, hotels and other institutions, hospitals, delicatessens, bakeries, schools, colleges, concessions, cigar stores, resorts, variety stores, and candy stores.

USE HAS EXPANDED

The new portable self-contained freezer is ideal for making and dispensing frosted malted milk, soft ice cream, sherbets, ices, frosted fruit drinks, and numerous frozen specialties. It can also be used for producing ice cream to be drawn off and placed in a hardening cabinet for the usual type of hardened ice cream.

It is a practical investment that pays for itself quickly. Moreover, it can be used by the small merchant as well as the large operator. It has proved itself a sensational money-maker for every merchant who can logically apply it to his business.

SERVICE NO PROBLEM

The service problem has been almost entirely eliminated. The responsible manufacturer no longer designs his products with special controls, exclusively designed condensers, etc., but on the other hand uses standard parts available in every town and city. Should service be required, the unit is accessible and any trained man can make adjustments.

Obviously the installation of a portable unit is simple. The newest type self-contained, fully automatic, "plugs in like a radio" freezer can be carried easily by two men. After it is placed on the back-bar or counter and plugged in on any 110 volt circuit, it is ready for operation.

The refrigeration distributor and dealer is furnished with a sales manual, operating instructions, recipe book, data on the profits that can be earned by the freezer, list of potential prospects, and various proved merchandising plans.

WHO'S TO SELL IT?

What type of salesman can best sell this package unit?

As with any other specialty item, the salesman must get fully acquainted with the freezer, its operation, the products it will produce, and the profits that the owner can reasonably expect. Experienced salesmen will always have a decided advantage over the less experienced man, but any salesman can acquire this knowledge if he will apply himself in the same manner he did to learn how best to sell household refrigerators, commercial units, beverage coolers, self-contained air conditioners, and other refrigerated products.

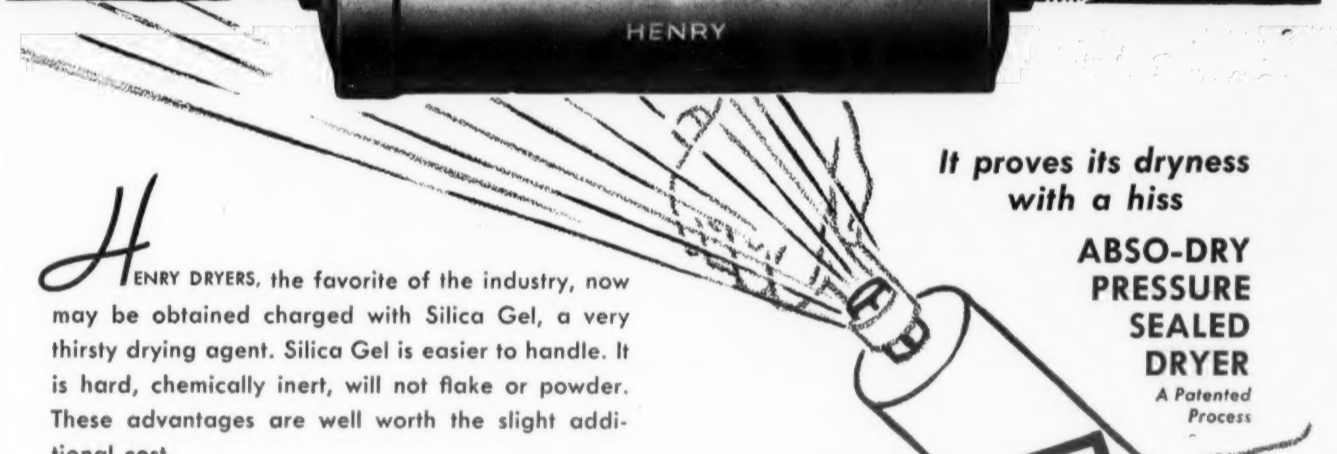
The counter freezer is still in its infancy. No well informed analyst has even hinted that the saturation point is imminent. Less than 25,000 counter freezers of all sizes have been built to date. Of this total production, the self-contained, portable freezer represents scarcely 5,000.

There may be a difference of opinion regarding the best method to market freezers—direct salesmen or distributors—but one thing is certain: the new self-contained, portable, fully automatic freezer offers new opportunities for the aggressive merchandiser of refrigeration products.

Porcelain Enamel Men Name 'Defense' Group

BALTIMORE—W. Russell Greer, vice president of Porcelain Enamel & Mfg. Co. here, has been appointed chairman of the committee to co-ordinate the porcelain enameling industry for national defense.

Members of the committee are George Blome, vice president of Baltimore Enamel & Novelty Co., and C. E. Meisner, Carnegie-Illinois Steel Co., Washington, D. C. A committee meeting will be held soon.



It proves its dryness with a hiss

ABSO-DRY PRESSURE SEALED DRYER

A Patented Process

HENRY DRYERS, the favorite of the industry, now may be obtained charged with Silica Gel, a very thirsty drying agent. Silica Gel is easier to handle. It is hard, chemically inert, will not flake or powder. These advantages are well worth the slight additional cost.

The exclusive Abso-Dry Pressure Sealing process is used in the manufacture of a Henry Dryer. Before it leaves the factory each dryer is thoroughly dried and then charged with dehydrated air under pressure. The hiss of this air escaping when you open the seal cap prior to installation proves that the dryer is free from leaks and in its original factory packed condition.

In addition to Silica Gel, Henry Dryers are also available charged with Activated Alumina, Drierite, Calcium Chloride and Calcium Oxide. Ask your jobber for them.



FOR YOUR NEXT JOB TRY BALANCED-ACTION VALVES

Dryers, Strainers, and Valves for Refrigeration and Air Conditioning. Also Ammonia Valves and Forged Steel Fittings.

BALANCED-ACTION VALVES

Henry Balanced-Action Diaphragm Packless Valves have 24 important features that mean easier valve operation, longer diaphragm life, and neater, less expensive installations. They cost no more than ordinary valves. Try them on your next job.

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All the Traffic Will Bear

SHORTSIGHTED policy in any business is that of "charging all the traffic will bear." One need have no social consciousness at all to determine the validity of this premise; its proof turns up all the time. Depend upon it, if you are charging too much for a product or service, that fact will become known, and others will find a way to do it cheaper and cut your business from under you.

The refrigeration business has seen the operation of this law work out over and over again. It has accounted for the rise of some manufacturers, and the demise of others. It has accounted for changing routes and methods of distribution, and it has set in motion whole new cycles of merchandising methods.

Service Man Emerges As a Merchandiser

One of the most recent of these cycles was the emergence of the service man as a merchandiser. He was often first to know when a part or a unit needed replacing. It was his opinion that such replacement cost, when made through the existing channels of distribution, was excessive. So he shopped around, bought the article himself, sold it at a small profit.

As a result, a whole crowd of small manufacturers became big manufacturers (especially in commercial refrigeration), and the parts jobbing business became really important in this industry.

Some Try To Make

'Good Thing' Out of It

Today, according to many reports from the field, there are certain service men who are, in turn, making a "good thing" out of this business. They are trying to build a fence around it, and are charging "all the traffic will bear."

Furthermore, there is a tendency on the part of such men to duck responsibility for the operation of systems they install. Sometimes, it is charged, low-price

installations are deliberately made which these marginal operators know will not work at the time—so that they can come back and sell a few more pieces to make it function satisfactorily.

When purchasers complain, they are answered with:

"You got a bargain, didn't you? What do you expect for your nickel?"

Customers Won't Take It 'Lying Down'

Customers, of course, don't take this sort of treatment—or neglect—"lying down." They remember the lesson they have learned, they tell others, and as a result, business gets better in that community for enterprises which intend to stay in business a long time and must build for the future on the solid rock of customer satisfaction.

This should not be construed as a blanket condemnation of product selling by service men. On the contrary, there are many service companies who are in business to stay, and who operate that way.

Shady Operators Give Black Eye To Rest

But reports have been coming in—and more frequently of late—that there are numbers of marginal operators who are giving almost the whole service fraternity a black eye.

Most complaints can be classified as:

- (1) Overcharging for service work.
- (2) Failing to give satisfaction to customers who have purchased parts or complete units through the service man.

Give Value Received—if You Want To Stick Around

Competition is so terrific in this industry that uneconomic units soon eliminate themselves.

In this business it's good business to give value received—if you want to stay in business.

QUOTED

The Jitters

Headlines 6 inches high of the daily happenings in Europe and the British Isles, radio news blaring news and views every 15 minutes have given a considerable part of our population a bad case of "jitters."

Merchants who spend their time discussing the war with their customers are in effect asking their customers to buy less. When people are jittery they curtail their buying. Merchants who are smart refrain from discussing the situation in any way and every customer that comes in the store is detoured into constructive thinking. Result: They buy more and, more often.

Salesmen who call on these same merchants must also work along these lines. Under no circumstances discuss the war, or the possibilities of us being drawn into the conflict.

Confine your talks to how the merchant can increase his sales and profits. How through better display and greater variety he can cause his customers to buy more from him and less from the big price cutter down the street. If the salesman thinks and talks constructively the merchant's mind will be turned back to his own business, rather than to the business of others and a sale will be made.

Think, talk, and act constructively, not destructively, and you will find your life happier and more prosperous.—*Supercold News*.

They'll Do It Every Time . . . By Jimmy Hatlo



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LETTERS

Using the 1936 Specifications Book

Sieg Co.
500-516 Iowa St.
Davenport, Iowa

Editor:

Is it possible for you to give us the correct motor that should be installed on a type CM-4A-452 General Electric air-cooled compressor?

What I have in mind is matching this compressor up with the proper motor that the unit was equipped with when built by the General Electric Co.

If you happen to have a book form that covers compressor models of the manufacturers giving their motor, horsepower, etc., we would like to have same for our files so that we could check the different compressors by model numbers when same are worked on.

NEIL J. COLLINS,
Engineer

Answer: The 1936 Refrigeration & Air Conditioning Specifications Book shows that the General Electric CM-4-A compressor operates with either a 1/2, 3/4, or 1-hp. motor, probably depending upon the application. The compressor will probably operate with any one of these three sizes of motor if proper consideration is given to the other factors involved.

The 1936 Refrigeration & Air Conditioning Specifications Book includes specifications of all makes and models of household and commercial refrigeration units through 1936. The information includes the bore, stroke, and speed of all makes as well as data on the refrigerant charge, type of controls, belt sizes, etc. It is now available at a cost of \$2.00.

Carrier's Bonus & Salary Plan

Niagara Blower Co.
673 Ontario St.
Buffalo, N. Y.

Editor:

Thank you very much for your letter of Aug. 16 and also your Dec. 6, 1939 issue of AIR CONDITIONING & REFRIGERATION NEWS.

The issue which you sent us did not contain the information we were interested in and undoubtedly we have given you the wrong date of the issue we have in mind. However, the article we are trying to get hold of concerns the bonus and salary set-up of the Carrier Corp., Syracuse, N. Y. This article explains in detail the bonus system effective in management, office, shop, etc. As near as we can judge this issue appeared sometime in December or the early part of January.

If you can locate the issue this article appeared in and forward it to us we shall appreciate it very much.

EUGENE Y. SCOTT,
Auditor

Answer: Under separate cover we are sending you a copy of the April 3 issue of AIR CONDITIONING & REFRIGERATION NEWS, on page 1 of which is the article "Carrier Men Share Firm's Fortunes in 'Five-Year Plan'."

Deodorizers By Betz Of Hammond, Ind.

Betz Corp.
Betz Bldg., Hammond, Ind.

Editor:

I have just noticed that the Gibson Refrigerator Co. of Greenville, Mich. wrote your paper inquiring as to the names of manufacturers of deodorizers for use in refrigerators.

Evidently your card file is not quite right inasmuch as they gave the name of the Betz Air Conditioning Corp. of Kansas City, Mo. I might add that there are patents granted covering the use of activated carbon in refrigeration, some of which patents are held by us and others of which we have the exclusive license. In any case, I would appreciate your having the files corrected, so that our name will be given to any future inquiries.

LYMAN B. BETZ

Servicing An Orphan Machine

609 N. Wallace St.
Indianapolis, Ind.

Sirs:

I understand that you publish a rather complete booklet of practical information on the servicing of the Grunow refrigerator.

I should like very much to have such help available and am writing you for further information. I shall appreciate your considering this communication as an order and returning the above pamphlet or book with a statement of cost, or C.O.D. if you prefer.

H. W. NORCROSS

Answer: Information relative to the servicing of Grunow household electric refrigerators was published in a series of five issues of AIR CONDITIONING & REFRIGERATION NEWS, in the fall of 1939.

We have not yet put this information into booklet or pamphlet form so we are sending you the five issues, which cost \$1.00.

Book Saves Him 'Hours & Dollars'

West Sayville, N. Y.

Editor:

Just a line to say I would like to recommend the book Refrigeration & Air Conditioning Specifications. To say I could not do without it would be putting it mildly. It saves me countless hours and dollars. It's simply a matter of looking up the type in the index and turning to the page.

ISSAC DOANE

Why Change A Name?

705 E. Knollwood Ave.
Tampa, Fla.

Editor:

Please transfer the AIR CONDITIONING & REFRIGERATION NEWS to my new address.

I am more than pleased with your publication and think it an asset to any person in any line of the refrigeration business.

By the way—what is the matter with the word refrigeration that it should be changed? Does anyone think it would do the industry good to change names after so many

years? Do many men change business names after the public is acquainted with their present name? I don't think they'd risk it.

SAM F. GRAZIANO

We Apologize, Friend

208 E. Main St.
Batavia, N. Y.

Sirs:

I never want to miss this paper. Instead of cutting us off why didn't you send your bill. Our girl would have sent check.

ELMER B. ADELMAN

Psychrometric Chart Appeals To Him

Russell Parks, Inc.
302 S. Fayetteville St.
Asheboro, N. C.

Editor:

I enjoyed very much the article in the News regarding the use of a simplified psychrometric chart. The simplicity of the chart appealed to me and I am writing to learn if we could be favored with one of the pocket charts which the article stated had been distributed by the Electromatic Corp.

RUSSELL PARKS

Answer: Address Electromatic Corp., 2100 Indiana Ave., Chicago.

Fruit Freezing

Pound, Va.

Sirs:

In reply to yours concerning booklet on locker storage and subscription to the News. Book and several issues of News have given me much information sought on "Sharp Freezing" and storage a line in which I hope to become specialized and develop business in sharp freezing fruits on moderate scale.

GEO. J. PERCIVAL

Can't Tie It

Box 884, R. R. No. 1
Melrose Park, Illinois

Sirs:

In my humble opinion the NEWS can't be beat, or even tied.

JOSEPH DEDICH

Locker Storage

Wood Conversion Co.
St. Paul, Minn.

Sirs:

Recently you sent to me a booklet covering modern methods of food preservation. This booklet is proving very useful and I should like to have you send me another copy. It is Manual No. LS-1 by P. B. Redeker. Wood Conversion Co.

Columbus Refrigeration Co.
352 N. High St., Columbus, Ohio

Sirs:

With our subscription to your publication we were given a Refrigerated Locker Store Manual No. LS-1.

We have found this manual to contain many useful articles and valuable information and would, therefore, like to order another one from you.

Kindly send this book to us as soon as possible and oblige.

A. M. McCORD

Who's Who Where



G. W. CHANDLER

G. W. Chandler, With Brunner For 21 Years, Becomes Copeland Agent

SIDNEY, Ohio—Appointment of George W. Chandler as eastern representative for Copeland Refrigeration Corp. has been announced by Frank J. Gleason, vice president in charge of sales. Mr. Chandler will represent all Copeland products, including commercial units, water coolers, and household refrigerators. For the past 21 years, Mr. Chandler has been associated with Brunner Mfg. Co., and has represented that company in various territories throughout the United States.

Brous Named Eastern Car Manager For Crosley

CINCINNATI—Walter L. Brous has been appointed district manager for Crosley automobiles in Greater New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia, and West Virginia. Mr. Brous spent several years as sales representative for Willys-Overland, Chrysler, and Plymouth cars in this territory. Prior to joining the Crosley automobile division, he was sales manager of Freed Heater & Mfg. Co., a division of Klein Stove Co., Philadelphia.



J. H. WILEY

J. H. Wiley, Formerly of Norge, Enters New Field

ST. LOUIS—Joseph H. Wiley, former Norge executive, has been elected vice president and general manager of W. G. Shelton Co., St. Louis manufacturer of beauty parlor equipment.

In addition to his work at Norge, Mr. Wiley's management and merchandising experience includes executive posts with such concerns as Altorfer Bros. Co., Peoria, Ill., and American Ironing Machine Co., Algonquin, Ill.

Monninger Rejoins Auto-Lec As Advertising Manager

NEW ORLEANS—H. V. Monninger, until two years ago advertising manager of Auto-Lec Stores, Crosley distributor here, has rejoined this company in his former capacity. He returned to aid in the celebration of the Auto-Lec company's twelfth anniversary.

Two Men Added

OXFORD, N. C.—A. B. Wilson has been hired as a full-time salesman by Reynolds Electric Co., local Frigidaire dealer. J. M. Royster, who formerly worked with this firm on a part-time basis, has now been given a full-time job with the Reynolds organization.

Distributor-Dealer Doings

Appliance Dealers Show Big July Sales Gain

WASHINGTON, D. C.—Household appliance dealers reporting monthly sales to the Bureau of the Census showed an increase during July of 21.5% over the same month of last year, compared with 8.9% for all types of stores reporting in the study.

Appliance dealerships led all business classifications in sales gains for the month, motor vehicle dealers being second, with a gain of 21.4%. Reports of 298 appliance dealers are included in the study, compared with a total of 24,057 independent stores reporting.

For the first seven months of the year, sales by appliance dealers reporting to the study were 15.9% higher than for the same period of 1939. This compares with a gain of 7.9% for all reporting stores.

Calif. Electrical Bureau Changes Its Name

SAN FRANCISCO—Name of the Pacific Coast Electrical Bureau, Northern Division, has been changed to Northern California Electrical Bureau, reports George W. Barker, manager.

More accurately describing the area in which the organization functions, the change in name also tends to eliminate possible confusion with other Pacific Coast organizations, Mr. Barker says. Activities of the bureau remain the same. Headquarters are at 477 Sutter St.

Change in the name of the organization does not affect the Pacific Coast Electrical Association nor its subsidiary, the Pacific Coast Electrical Bureau. Activities of these groups continue as before.

R. Cooper Jr. Sponsors R. D. L. Outing

CHICAGO—More than 200 members of the Retail Development League were guests of R. Cooper Jr., Inc., G-E distributor here, and the General Electric Co. at the first annual outing held at the Sportsman's Country Club last month.

A full schedule of sports was arranged for the affair, and prizes were awarded to winners of the different sports tournaments.

Among the speakers during the evening banquet were R. Cooper Jr., S. B. Maher, general sales manager of the distributorship; C. L. Hobbs, city dealer manager; Mr. Strecker, district manager of the General Electric Co.; and Jean DeJen, president of the Retail Development League.

Wis. Utilities Will Hear Range & Heater Talks

MILWAUKEE—Talks by manufacturers on further standardization of hot water heater construction and discussions on refrigerator and range prices are expected to mark the annual convention of the electric section of the Wisconsin Utilities Association to be held Nov. 11 and 12 at the Pfister hotel here.

Four Star Appliances Doubles Floor Space

STUDIO CITY, Calif.—Cliff Swanson, owner of Four Star Appliances, Frigidaire dealership, has doubled the firm's previous floor space by taking over an adjoining building.

In addition to a model kitchen and an augmented refrigerator display, the new space will include the largest gas range display in the San Fernando Valley, says Mr. Swanson. A line of fireplace fixtures also will be added to present products.

Mr. Swanson founded the firm four years ago, when Studio City was still in the undeveloped stage. In addition to being the city's pioneer appliance dealer, he is president of the town Rotary Club and a member of the board of directors of the chamber of commerce.

Wichita Westinghouse Dealers Hold Meeting

WICHITA, Kan.—Dealers and salesmen of Westinghouse Electric Supply Co. here met at the firm's warehouse recently to study advertising plans and outline sales promotion on new Westinghouse units.

Among those in attendance were D. D. Soderberg, merchandise representative; R. R. Farry, branch manager; Harold Lindstrom, office manager; C. A. Pohlman, Hutchinson, Kan., apparatus sales; J. A. Broadhurst, appliance supervisor of the midwest district; C. P. Brown, merchandise representative; and H. A. Smock, apparatus sales.

Investigate this Lower Priced Refrigeration Control

FRIGIDAIRE'S

Precision-Built

"YL" SWITCH

✓ One Model for All Common Refrigerants (Freon 12; SO₂; Methyl Chloride)

✓ Simpler, More Compact Design

✓ More Easily Adjusted—has visible scale for preliminary setting

✓ Furnished with Low Pressure or Thermostatic Control

✓ With or Without Motor Overload Protection

✓ High Pressure Cut-Out if Desired (comes in double unit case)

Available in various combinations of units to adapt it to every refrigeration need. Differential—Thermostatic type—minimum 3 to 4 degrees, maximum 10 degrees... Low Pressure type—minimum 5 lbs., maximum 55 lbs.

Write your Frigidaire Distributor today for new low prices. Ask for your copy of descriptive booklet with full details.



TO SATISFY YOUR EVERY REFRIGERATION SERVICE NEED



A Model for Every Commercial Refrigeration Need

MODEL TOO: (shown above) Thermostatic Control without High Pressure Cut-out. Cold Control standard (as illustrated).

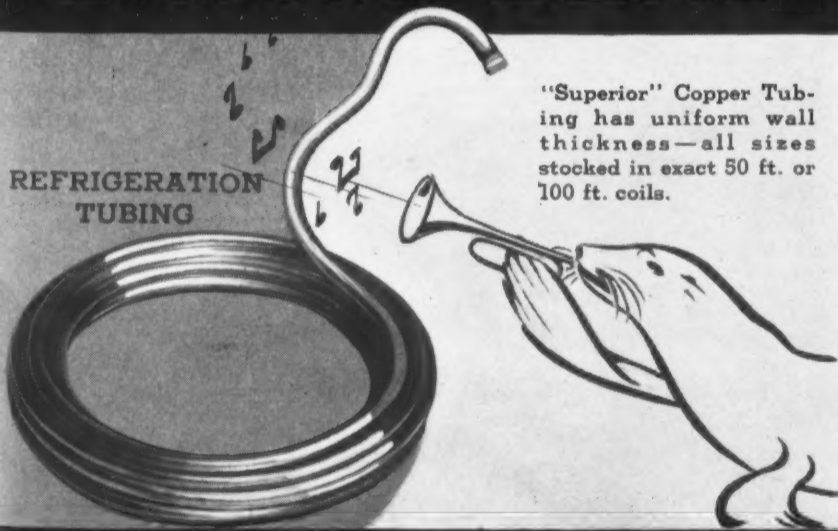
MODEL TOH: Thermostatic Control. Includes High Pressure Cut-out. Double unit case. Cold Control standard.

MODEL LOO: Low Pressure Control without High Pressure Cut-out.

MODEL LOH: Low Pressure Control. Includes High Pressure Cut-out. Double unit case.

Overload protection is available in any model as desired.

EASILY BENT



PENN BRASS & COPPER CO., INC.
ERIE, PA., U. S. A.

Dependable
High Purity
and Dryness

Prompt
Shipments
Coast-to-Coast
Distribution

Helpful
Technical Service
Always Available



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The Preferred METHYL CHLORIDE for Service Work

E. I. DU PONT DE NEMOURS & CO. (INC.)

The R. & H. Chemicals Dept.
Wilmington, Delaware

District Sales Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco

Analysis of Bids Shows How Detroit Architects Award Cooling Contracts

By Henry Knowlton

DETROIT—Air conditioning dealers and distributors are often under the impression that owners and architects are only interested in the final price, when bids have been taken on a proposed installation. The thoroughness and care with which many architects examine all proposals submitted is illustrated by the "breakdown" of bids which is made by Wright & Rogvooy, Detroit architects, before any contract is awarded for an air conditioning system.

Because Frank H. Wright and Ted Rogvooy handle a great deal of "commercial" architecture, which includes new and remodeled theaters, stores, store fronts, interior decoration, and similar work, they cannot be considered novices in the business of buying air conditioning. Every

theater, and the majority of stores handled in the Wright & Rogvooy office, includes air conditioning in the specifications.

COMPLETE ANALYSIS MADE

The "breakdown" of air conditioning proposals shown on this page is taken from bids received on a typical Detroit theater seating approximately 1,200 people. Before the contract was awarded Wright & Rogvooy made this analysis and comparison chart so they could show the owner exactly what he was getting in the way of air conditioning equipment.

In this particular instance the contract was awarded to one of the higher bidders when the owner decided, according to Ted Rogvooy, "to purchase the best system he could get irrespective of price." For obvious reasons the bid prices are not given in this analysis, and the bidding firms are designated by the letters "A" to "G," in the first column of the table.

Under the heading "compressor" the architects put down bore and stroke, number of cylinders, speed, capacity reduction method, and total capacity in tons. The bore and stroke indicate the capacity of the machine to displace refrigerant, in direct ratio to compressor speed.

In this analysis the presentation of these two factors permits the owner to take his choice between a machine with a relatively small number of cylinders operating at low speed, or a multiple cylinder unit operating at high speed.

Various manufacturers present excellent arguments for either type of compressor, but the owner and architect must have some basis for making a choice.

Capacity reduction may be effected by change in compressor speed, starting and stopping the machine, use of suction by-pass in the refrigerant line or cylinders of the compressor, or some combination of these factors. In this instance the owner and architect selected a machine having a suction by-pass built into the compressor itself.

Naturally the architect and owner

are both interested in the total load the compressor must handle, as estimated in tons of refrigeration. In this case the required equipment was found to be approximately 80 tons. Proposals submitted offered capacities ranging from 73 to 92 tons, but an analysis of these capacities in relation to motor horsepower shows a wide variance.

TONS PER HORSEPOWER

For example, one bidder claims to be able to develop 78 tons from a 60-hp. machine, another uses a 60-hp. motor plus a 25-hp. motor to obtain 85 tons, while a third uses one 80-hp. motor to obtain 75 tons. Obviously, there is a vast difference in the ability of air conditioning compressors to develop tons of capacity in relation to horsepower, or the engineers making up the proposals have used different methods for arriving at their conclusions. Motor speeds are, in this analysis, of little importance.

Because of the characteristics of local power available for the operation of air conditioning equipment, an automatic or semi-automatic reduced voltage starter is necessary. As there is some difference in the cost of these two types of starters, the architect and owner want to know which type of starter is offered in the proposal. In this instance the contract was awarded to one of the firms supplying a fully automatic reduced voltage starter, so the machine could operate from a thermostat without manual attention.

COIL DEPTHS VARY

Square feet of coil area to be supplied shows that all firms bidding figure coil surface very close to the 61 sq. ft. called for in the specifications. In the matter of coil depth, in rows, there was considerable difference of opinion. Proposals offered coils having 4, 5, and in one instance 6 rows of tubes deep. A 5-row coil was finally selected as having the best characteristics for absorbing the correct proportions of sensible and latent heat, with relation to the total load.

All bidders agreed to supply a duct system to be installed overhead, down the center of the theater. Some firms extended this to the lobby, others did not. The architects made an analysis of exactly how much ductwork each bidder agreed to furnish.

In the matter of filters, the speci-

cations called for standard dry filters for the total air handled—in this instance about 30,000 cu. ft. According to Mr. Rogvooy, the firm sometimes receives bids containing provisions for filters on the fresh air only. In this instance all bidders agreed to supply filters for 100% of the air handled, but this subject is always carefully checked.

All firms agreed to supply insulation on the refrigerant suction line, which is in accordance with local codes and ordinances.

INSULATION CONSIDERED

Insulation on the supply duct, however, proved to be a matter for closer scrutiny, as several types of insulation were offered. These included asbestos, Eagle-Ficher lead wool 3½ inches thick, rigid insulation 2 inches thick, and "wrap-around" fireproof material 1½ inches thick. The latter material was finally selected as most suitable for the installation.

Specifications called for draftless distribution of air in the theater. Contractors bidding were permitted to suggest their own methods of meeting this requirement. One bidder offered Barber-Coleman "Venturi-flo" ceiling outlets; a second offered a flat metal baffle; two others suggested ornamental plaques, of a home made variety.

Three firms bid with Anemostat ceiling outlets and from previous experience with air distribution problems in theaters the architects and owner selected this method of air distribution, even though it was slightly more expensive than other suggested methods.

In Detroit all piping, refrigerant piping, pipe covering, and duct insulation is handled by union labor. Theaters employ union labor also, and for this reason the architects checked to be sure the job was run on a union labor basis. All bidders complied with this provision.

GUARANTEE IS IMPORTANT

The guarantee required by the architects included design conditions of temperature and humidity; number of people this guarantee was based on as this is the largest load factor in theater air conditioning; amount of fresh air supplied; length of free service period, and approximate installation time.

All bidders based their guarantee on 80° F. dry bulb with 50% relative humidity except one. This firm

offered a lower temperature, 77° F. and a higher humidity—60%. Obviously this compressor could be operated at a lower suction temperature and more capacity obtained from the same horsepower. The architects and owner, however, awarded the job on the basis of 80° F. and 50% humidity.

While guarantees were based on from 1,000 to 1,500 people, the theater would only seat 1,200 people at capacity, and there was no reason for offering to cool more people than the theater itself would hold. For this reason from 1,000 to 1,200 people was accepted as the optimum and the extra number offered in one bid was not given serious consideration.

In the matter of fresh air all firms agreed to supply approximately 7,700 c.f.m. total, and little variance was found in this respect. All offered service for one full year from the date of starting the system.

Installation time varied from 5 to 6 weeks and in this case was not a serious consideration. The analysis is made, however, to prevent delay in the completion of the system, in case the bidder selected will be slow in completing the contract, Mr. Rogvooy states.

MICHIGAN SALES TAX

In the state of Michigan a 3% sales tax is charged on all materials going into a job, or in some cases on the total price of the completed contract. This may run from \$150 to \$300 on a \$10,000 job. Certain contractors offer a price "subject to 3% Michigan sales tax," and others offer a price "including 3% Michigan sales tax."

Wright & Rogvooy always examines these provisions carefully, as it might make a difference of perhaps \$300 between certain bids.

According to the firm of Wright & Rogvooy, the air conditioning industry is gradually stabilizing, and the difference between proposals, with respect to price, tonnage, and other factors, is not so great as it was several years ago.

The various differences are still great enough, however, so the firm makes a careful analysis of all bids received, and offers this information to the owner, with recommendations as to which proposal offers the best system for the money expended. According to Mr. Rogvooy, the idea is to get the best possible set up for the price, and not the lowest price on the least desirable system offered.

'Breakdown' Shows Important Factors in 7 Proposals

Bidder	Compressor			Motors and Starter			Coils			Duct System—Incl. Lobby		
	Bore & Stroke	No. of Cylinders	Speed R.p.m.	Capacity Reduction	Capacity Tons	Hp.	Speed	Starter	Sq. Ft. of Face Area	Rows Deep	Type	Yes
A	9½ x 7½	2	340-450	Modulating	81	75	1,200	Semi-automatic	60.1	4	Overhead	Yes
B	6 x 4½	4	625	Fixed	75	80	1,750	Semi-automatic	61.5	5	Overhead	Yes
C	3 x 3½	8	1,750	Fixed	85	25-60	1,750	Reduced voltage	61.6	4	Overhead	Yes
D	9½ x 7½	2	400	Suction by-pass	78	60	1,750	Reduced voltage	61.0	6	Overhead	No
E	5½ x 4½	6	518-675	Suction by-pass	82	75	1,800	Reduced voltage	61.0	5	Overhead	No
F	6 x 5	4	570-800	Suction by-pass	73	50-20	1,725	Reduced voltage	60.1	4	Overhead	No
G	6 x 5	4	500	Suction by-pass	92	40-40	1,750	Reduced voltage	60.0	5	Overhead	No

Bidder	Insulation		Grilles Type	Labor	Guarantee—Fresh Air			Installation Time	Sales Tax			
	Filters Dry	Suction Line			Temp.	R.H.	People					
A	100%	Yes	Yes	Venturi-Flo	Union	80° F.	50%	1,500	7,700	1 year	45 days	No
B	100%	Yes	Yes	Baffle	Union	80° F.	50%	1,250	7,700	1 year	5 weeks	No
C	100%	Yes	Yes	Metal plaque	Union	80° F.	50%	1,000	7,700	1 year	6 weeks	Yes
D	100%	Yes	Yes	Anemostat	Union	80° F.	50%	1,200	7,700	1 year	5 weeks	No
E	100%	Yes	Yes	Eagle-Ficher	Union	80° F.	50%	1,000	7,700	1 year	6 weeks	Yes
F	100%	Yes	Yes	Anemostat	Union	77° F.	60%	1,000	7,700	1 year	5 weeks	Yes
G	100%	Yes	Yes	Anemostat	Union	80° F.	50%	1,200	7,700	1 year	6 weeks	No

Tests that Assure You The Dependable, Low Cost Performance of CURTIS Condensing Units

Dehydrating

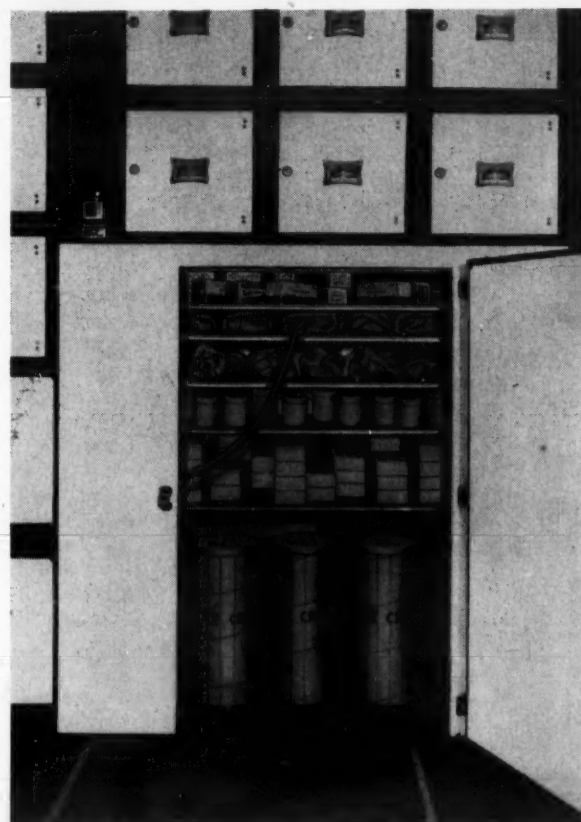
Every compressor of every CURTIS condensing unit is given, not one, but two dehydrations in baking ovens under temperatures of 282 degrees F. First the compressor itself is thoroughly dehydrated and evacuated of foreign matter. Then after assembled into a unit the entire unit is again dehydrated and a vacuum of as high as 28" produced to insure the removal of any non-condensable gases or moisture which might have entered thru fittings during the assembly process.

Thorough dehydration and cleaning is only one of many examples of the care and precision of Curtis manufacturing methods. The result is the exceptionally long life, high efficiency and care-free performance of every Curtis Condensing Unit.

Write for full information.

Curtis Refrigerating Machine Company
1912 Kienlen Avenue St. Louis, Missouri
Established 1854
Division of Curtis Manufacturing Co.

Locker Storage Innovations Add To Plant Income and Customer Comfort



Trend Toward Urban Popularity Is Pointing Way To Future Markets

By E. L. Mohr, Harvey & Mohr, Sioux City, Iowa

That the urban dweller is "getting wise" more and more every day to the economy and convenience of refrigerated lockers, is best shown by the increase of refrigerated locker plants in towns of larger population as well as the increase in small No. 2 and No. 3 plants that are rapidly being established in the rear of food merchandising stores in conveniently located "up-town" points.

These small 100 to 200 locker plants are filling up, apparently without disturbing the business of the present plant in the locality, and an ever increasing number of rentals are coming from the "town folks" who, a few years ago, looked upon locker usage as a proposition for the farmer only.

Hundreds of wage earners are constantly learning of the savings they can derive from locker use by buying their products at wholesale at seasons of the year when prices are most attractive for "out of season" consumption. The wage earner has found how to make his salary check go farther by buying a half hog, a beef loin, strawberries and raspberries by the crate as well as roasting ears, asparagus, fish and poultry, in larger lots, and thereby enjoying a much better diet and still at the prices that these items can be purchased when at their peak of production.

This town user, in reality, repre-

sents a much better sales outlet for all the above items and, therefore, though he may not consume as large a poundage as the rural user, the fact that this merchandise can be sold instead of being raised for direct consumption, makes him even a more profitable locker occupant for the food merchandiser plant.

The city user is possibly a trifle more demanding as to plant and product appearance and now that better freezing facilities are available and more thought is being given to "dressing up" the job, naturally this more modern refrigerated locker service is projecting a sales appeal not found in some of the older models.

One locker operator who is running a second plant in a midwestern town of approximately 2,600 population reports having sold as much as 22,000 pounds of beef quarters in a single month to the occupants of his 285 lockers.

Perhaps this locker operator is an exceptionally good merchandiser, but those refrigerated locker plant operators that give time and thought to the merchandising end of the business, will find profits from that angle to be very interesting.

In the line of mechanical developments for locker plants, three-hour double conduction freeze on -35° F. plate, controlled directly from the product to be frozen by needle-point

Left—Locker plant customers seem to feel more at ease when they can see out of the locker room, hence these window arrangements. Above—This cabinet-type quick freezer is compact, allows more room for lockers.

insertion in the package, is one of the latest developments.

Cabinet freezers are constantly becoming more popular because of the smaller amount of space they occupy and with the quick freeze, an operator can make three or four freezes per day and thus get approximately as much product turn-over with the small cabinet as he formerly did with his large slow freeze room.

This saving of space nearly always results in the addition of more lockers and thus increase plant income. These freezer cabinets are placed inside the locker room and occupy only the space of nine average size lockers, and are available at a cost approximating that of a cold storage door.

Fig. 1 shows the application in a locker room of the double conduction

freeze in an H-M quick freeze cabinet and the H-M needle-point control. Note that the shelves in the quick freeze cabinet are so placed as to permit ice cream storage on the floor, quick frozen food storage in the wider shelf spacing as well as the freezer shelves themselves. Cabinets for larger type plants have two doors instead of one to make the cabinet more accessible.

The picture also shows lockers atop the cabinet, thereby utilizing all available locker room space.

New Loc-R-Vue, 5-glass, 18 x 48-inch windows are now available, making possible a clear view of the locker room from the store. In this window on the locker room side, quick frozen products can be placed on display if so desired (many new plants have found a handsome profit

from the sales of commercially frozen fruits and vegetables).

This window, presenting a view both to and from the locker room, eliminates all possibility of attempted pilferage from lockers, and gives the locker user a feeling of security from the possibility of a sticking door.

Where the building construction will not permit the use of this type of window, streamlined porthole doors, likewise having five glass, are fast coming into popularity. The glass in these doors is usually about 6 inches in width and 14 to 15 inches in height to accommodate the various vision heights of locker customers. Through the streamlining and staining the natural grain of these doors, to match the color scheme, added beauty has been given to the plant which certainly adds tremendously to the general town customer acceptance of the refrigerated locker idea.

Master Refrigerated Locker Systems, Inc., at Sioux City, Iowa, is now producing a combination size compartment that will make individual space available to the renter at a yearly cost of \$6 to \$15.

The general trend of locker plant activity, as we see it, still leans toward service in connection with food merchandising establishments, smaller plants, more modern freeze, better appearance, and a higher quality of service from all angles.

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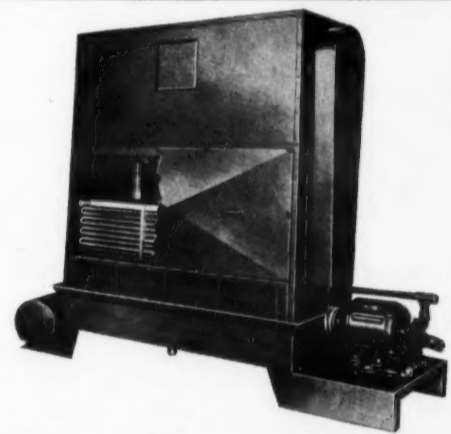
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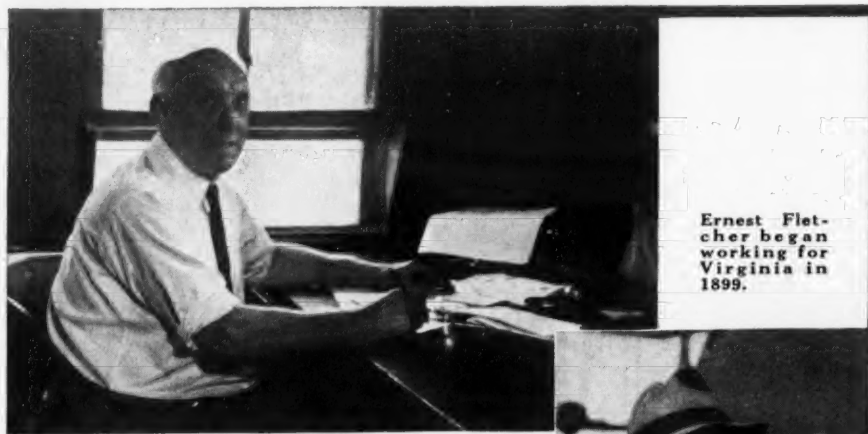
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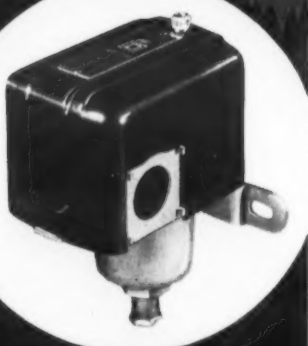
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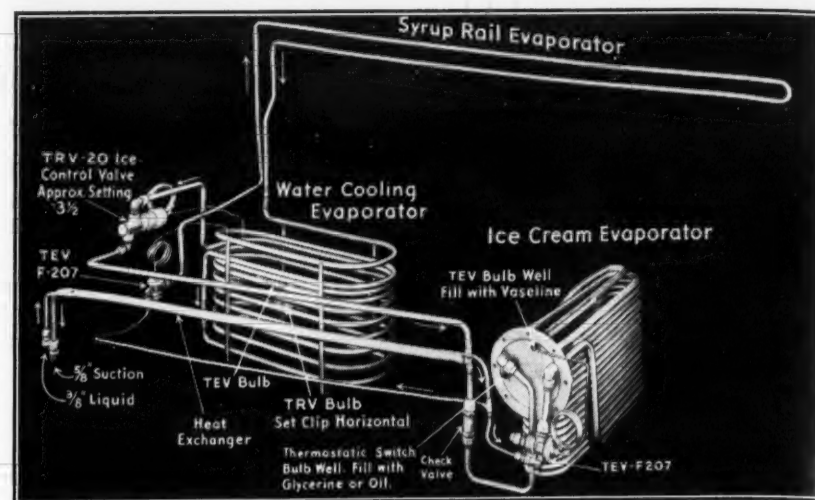
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Installation & Adjustment of the 'Liquid' DX System

Refrigerant and Unit Controls Used, and Adjustment Data

Editor's Note: The following is the first part of an article prepared under the supervision of J. G. Praetz, general service manager, Liquid Carbonic Corp., describing installation and adjustment procedure on present-day Liquid Carbonic soda fountains.

The News presents this information to its readers who are active in installation and service work as part of its program to bring to readers all and any information that may be helpful to them. The material also is supplemental to that published in Manuals SF-1 and SF-2 on Soda Fountain Refrigeration.



Phantom view of the "insides" of a Liquid Carbonic DX soda fountain, showing details of the refrigeration system, and the valves and control methods used for various phases of the system.

The "Liquid" DX soda fountain refrigeration system consists of three direct expansion tube type evaporators, one in the syrup rail, one in the water cooling section, and one in the ice cream section.

Three refrigerant valves are required to control the refrigerant flow and water bath ice formation—a TEVF207 (Automatic Products No. F207, orifice 0.045 inches), a TRV20 (Frigidaire) on the syrup rail-water cooling section evaporators, and a second TEVF207 (orifice 0.045 inches) on the ice cream section evaporator.

A Frigidaire No. 1122047 or a White-Rodgers thermostatic switch is supplied with the fountain (except for Woolworth and Kresge installations), the switch control bulb to be placed in the lower left hand ice cream evaporator bulb well. This well extends down at an angle into the holdover solution and should be filled with glycerin or petrolatum and plugged with a split rubber stopper.

This one switch will in all cases, except very heavy water load installations, be sufficient to properly control the ice cream and water cooling sections, due to the ice reserve and holdover in the water cooling section and syrup rail, without the necessity of a low pressure switch connected in parallel. All fountains are equipped with "Freon" valves as standard.

ICE CREAM SECTION

The ice cream section is refrigerated by a direct expansion type evaporator made up of about 70 feet of 3/8-inch copper tubing in a compact coil with a header plate so that the coil occupies the same space as the former 41X and 43X evaporators.

Refrigerant flow is controlled by a thermostatic expansion valve (TEVF207 Automatic Products) installed at the front of the evaporator with the control bulb located in a horizontal well which is silver soldered to the top evaporator coil. Fill this well with vasoline.

The TEVF207 has a liquid charged thermostatic element which eliminates any possibility of erratic operation as might occur due to transfer of the thermostatic charge in the case of gas charged power elements.

The temperature of the TEVF207 valve body or locating the valve in a cold spot does not affect the valve operation in any way. This valve as used on Liquid fountains is adjusted at the factory to a setting of 7° of superheat, which is slightly lower than the 10° standard superheat setting, for it was found 7° gave slightly better operation on Liquid fountains. In most cases it will not be necessary to readjust this valve in any way at the time of installation.

Be sure that both the expansion valve and switch control bulbs are pushed all the way in to the bottom of the bulb wells on this evaporator.

SYRUP RAIL-WATER COOLING SECTIONS

The syrup rail is refrigerated by a single loop of 1/2-inch tubing which is connected in series with the water cooling section evaporator, this latter being made of 3/8-inch tubing. The refrigerant flow is controlled by a thermostatic expansion valve (TEVF207 Automatic Products), the refrigerant passing first through the syrup rail evaporator, then to the water cooling section evaporator and out through a thermostatic regulating

valve (TRV20), which controls the ice formation.

The TEVF207 control bulb is clamped tightly to the fourth coil from the top at the front side, which gives one drier loop before leaving this evaporator, while the TRV20 bulb is clamped in a stainless steel clamp attached to the sixth coil from the top also at the front side. This clamp should be horizontal and the final TRV adjustment will be at approximately 3 1/4 to maintain the desired water cooling section ice formation.

The TRV20 has to be set colder on these DX fountains because the higher operating back pressure has resulted in a shorter condensing unit "on" cycle, making it necessary to build back the ice formation in a shorter time, requiring a wider opening or colder setting on the TRV.

The TEVF207 is factory-set to maintain 7° of super-heat at the bulb location and in most cases it will not be necessary to readjust this valve. Ice should form on all coils of this evaporator. In filling this water cooling section with water at the time of installation, care should be taken not to fill the section too full.

Fill with water to the level of the second block tin loop from the top on the water cooling coil so that when the ice has built up on the evaporator coils, raising the water level due to the expansion of the water on freezing to ice, the top block tin loop will just be covered with water. If filled too full, ice may build up under the compartment cover plates and lift the plates.

Both the TEVF207 and the TRV20 are accessibly located in the dry storage compartment on the side wall.

CHECK VALVE

A check valve is installed at the ice cream evaporator before its suction line tees into the suction line from the water cooling section. This check valve prevents the warmer refrigerant vapor from the water cooling evaporator condensing in the cold ice cream evaporator during the "off" cycle, which would result in a frost back at the start-up of the next "on" cycle.

REFRIGERANT LINES

The connections at the end of the fountain are for 3/8-inch liquid and 1/2-inch suction lines to the condensing unit.

CONDENSING UNIT CONTROL

A Frigidaire or a White-Rodgers thermostatic switch is supplied with the fountain and this switch alone is sufficient to control the condensing unit and maintain proper temperature conditions on all installations

except those which have very heavy water load requirements.

Where unduly heavy water load conditions prevail, a low pressure switch should be connected in parallel with the thermostatic switch and given settings not lower than 32 pounds cut-in and not higher than 6 pounds nor lower than 4 pounds on the cut-out.

The No. 1122047 Frigidaire thermostatic switch is given a factory setting of approximately 0° cut-out and 4° cut-in and will have to be readjusted according to local ice cream conditions. The minimum differential on this switch is 3° and the 4° factory setting on the differential must be increased to 7°.

This 7° differential can be obtained by turning the differential adjusting screw one complete turn counter-clockwise. The White-Rodgers thermostatic switch can be readily adjusted to give these settings.

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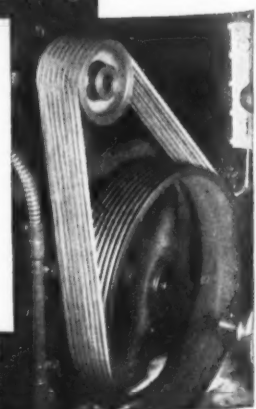
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Expansion Valve Troubles Found In Low Temperature Type Systems

Valves Often Wrongly Planned For Operating Failure; Testing Them Is the One Way To Be Sure

By Arch Black and Dean C. Seitz

Editor's Note: This week's article starts a new phase of the discussion of service problems of low temperature refrigeration equipment in common use. When this section is concluded, the authors will discuss service on specific makes of counter-type freezers.

The authors have made a survey of the major service problems encountered on direct expansion soda fountain and ice cream counter freezer installations. Results of the survey indicate that by far the great majority of service problems, (as reported by service men) involve the expansion valve.

One manufacturer reported that out of 20 expansion valves returned to them over a period of months, they did not find a single expansion valve which was defective. On a few of these valves it was found that the screen on the inlet liquid line had been plugged with dirt and copper chips. Apparently the remainder of the valves which were returned were considered defective by the service engineer when there was actually nothing wrong with them.

The survey clearly indicates that not all service engineers clearly understand the points which must be checked on a direct expansion refrigeration circuit. It is true that many of these points will make it appear that the expansion valve is causing trouble when it actually is not to blame.

Before considering the factors that may make it appear that the expansion valve is defective when it really is not at fault, it is necessary to consider the reasons for which an expansion valve can be considered truly defective.

In the case of an automatic expansion valve, the major point of defect would usually be a leaking needle or seat. This means that the seal needle of the valve has been scratched, permitting refrigerant to leak through the seat even though it has been tightly closed.

This may happen when very small metal chips, small enough to pass through the screen of the expansion valve, get into the valve body.

These small chips will scratch the needle, thereby permitting a leak.

Symptoms of a leaky expansion valve are easy to determine, for the pressure in the low side builds up rapidly when the condensing unit is not in operation, because refrigerant is continually passing into the low-side coil. When the condensing unit starts, this liquid will be drawn into the suction line and crankcase, frosting both of them.

In extreme cases, the system will show short of gas when the con-

Fig. 7 illustrates the equipment necessary to test a thermostatic expansion valve. Procedure follows:

1. With the bulb of the thermostatic expansion valve inserted in the crushed ice, the gauge connections loosened so that it will read, and the valve on the refrigerant drum opened, wait until the gauge point comes to rest. It might take one or two minutes the first time that the bulb is immersed in ice.

2. Turn the adjusting nut until the gauge reads 2 lbs. for a sulphur dioxide or 20 lbs. for a "Freon-12" valve.

3. Remove the bulb from the crushed ice and insert it in warm water and observe that the pressure on the gauge increases. The temperature of the warm water should be approximately 60 to 70° F. If the pressure does not increase when the bulb is immersed in warm water, this is a clear indication that the power element has lost its charge.

4. The bulb should then be

dirt may cause the seat or needle to leak or the bulb may lose its charge. The bulb or capillary line of the thermostatic valve will only lose its charge if it is severely mishandled, kinked, or bent, breaking the small capillary tube connecting the bulb and the valve itself.

It is obvious from the above that when soda fountain manufacturers have expansion valves returned to them that do not leak, it must be true that other factors are making it appear to the service engineer that the expansion valve is defective when it really is not to blame.



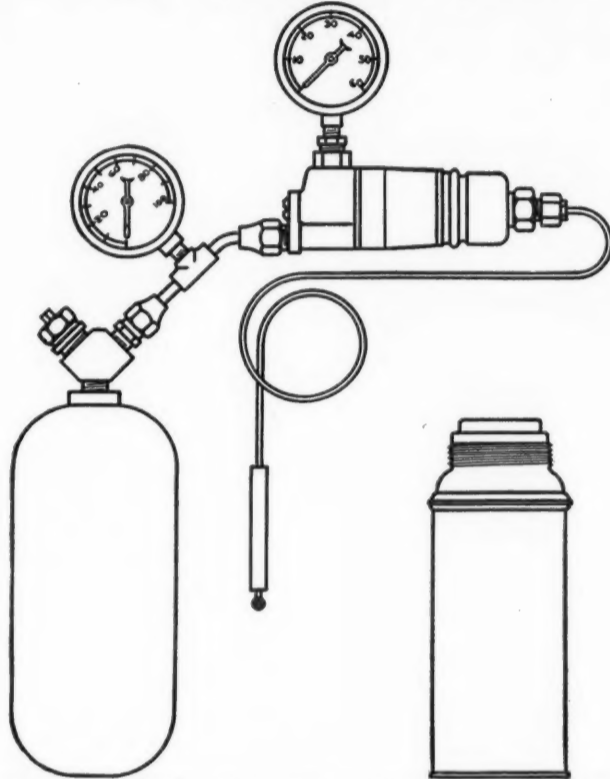
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Fig. 7—To Test Thermostatic Expansion Valves



Test equipment for testing thermostatic expansion valves. Refrigerant drum is at the left, thermos bottle filled with cracked ice at the right. Gauge readings referred to in article are on gauge connected to the valve.

densing unit is not running, and the pressure in the low-side coil will equalize with the pressure in the high side.

TESTING AN AUTOMATIC EXPANSION VALVE

There is a very simple method of testing an automatic expansion valve to determine whether or not the seat is leaking. To accomplish this a drum of "Freon-12" is attached to the inlet side of the valve. This operation places high pressure gas (not liquid) at the inlet port. Then to the outlet side of the valve is attached a short length of copper tubing, a gauge, and a hand shutoff valve on the extreme end.

The expansion valve should be opened quite wide and the hand shutoff valve cracked open slightly so that a little "Freon-12" gas is allowed to pass through the expansion valve seat.

Under these conditions, the gauge on the outlet side of the valve will show the pressure for which the valve has been adjusted. Now quickly close the hand shutoff valve and watch the gauge. The gauge will probably climb two or three pounds and then stop.

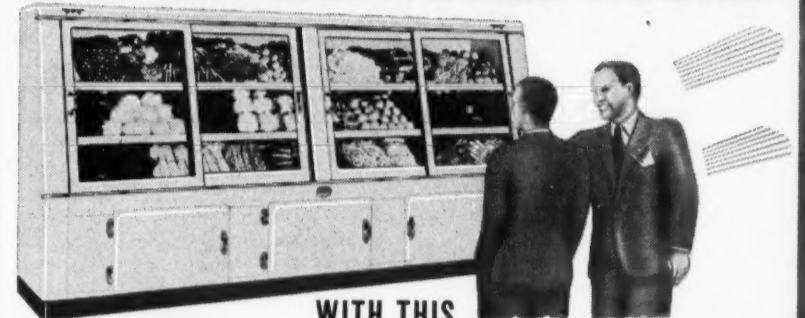
The two or three pounds additional pressure is that pressure necessary to firmly seat the needle and does not indicate a leakage. If on the other hand, the gauge needle continues to climb, it has been definitely established that there is leakage, for the pressure between the two sides is equalizing. This is the test placed on automatic expansion valves by some manufacturers when they are returned to them.

TESTING THERMOSTATIC EXPANSION VALVES

The following method of testing a thermostatic expansion valve is used by some equipment manufacturers in checking thermostatic expansion valves returned to them. These points are given to the service engineer so that he may guard himself against returning expansion valves which he thinks are defective but which he has not tested to determine if he is right.

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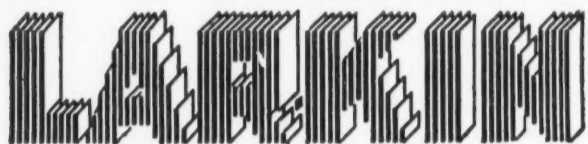
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What's New

Descriptions of some of the brand new items for the refrigeration and air conditioning, and major appliance fields

Kitchen Heater Designed To Stand Alongside Range

BRIDGEPORT, Conn.—A circulating kitchen heater, designed to be installed with any G-E electric range model, and to burn either coal or wood, has been announced by the appliance and merchandise department of General Electric Co.

The new heater, Model KHI-40, is designed for use where electricity is employed for cooking purposes but a source of kitchen heat for cold days is necessary.

The heater may be installed on either side of any G-E electric range, since it has the same height and depth as ranges with ovens below the range surface. Door handle matches the G-E range hardware, and the front swing door may be had for either right or left-hand mounting. The heater may be removed from the kitchen during summer months if more room is desired, and either electric range or heater may be modernized.

Flue comes through the top at the back instead of out the rear, so that the heater can be placed closer to the wall. Heating and cooling of the fire-box do not in any way affect the operation of the electric range.

Door, side panels, and backspasher of the heater are white porcelain enameled, while the top is finished in black porcelain enamel with blue lids. The firebox is 7 1/2 inches wide, 9 inches deep, and 15 inches long.

Frigidaire Offers Deluxe Range At Low Price

DAYTON, Ohio—A popular-priced deluxe electric range, with a recommended "Zone A" retail selling price of \$142.75, has been introduced by Frigidaire.

Known as model B-35, a major improvement in this model is an



oven light. Other features include a full size twin-unit oven, high-speed broiler, "Thermizer" cooker with heat control switch, surface units with five cooking speeds, signal lights for oven and top units, time signal, hydraulic type oven heat control, three storage drawers, and one-piece porcelain cabinet and cooking top.

Style Factor Added To Twin-Hotplate Design

BRIDGEPORT, Conn. — To the utility of the electric hotplate, with its advantages of clean, odorless, surface cooking on a small scale, General Electric has added a definite style factor in the production of two new twin units.

The new D70 hotplate, carrying a recommended list price of \$9.95, is equipped with two 6 1/2-inch porcelain surface units, one of which is rated at 1,000 watts and one at 650 watts. The 1,000-watt unit is controlled by a three-heat reversible rotary switch. The hotplate is constructed with chrome finish on the cooking top and legs, with front switch panel, and side panels are finished in white enamel.

Second new hotplate, Model D71, with a recommended list price of \$7.95, has the same electrical rating and equipment as the first, with chrome-plate legs and top and sides finished in a black baked enamel.

York Offers Improved Brine Testing Set

YORK, Pa.—York Ice Machinery Corp. has developed an improved brine testing set, said to be suitable for all pH determinations in the refrigerating plant, and to require no technical training on the part of the person using it.

Effort was directed toward improving the accuracy and appearance of the set and enlarging its scope. The research was carried out with actual brine samples taken from plants all over the country, so that all existing conditions could be taken into account.

Improvements claimed are:
1. Development of sharper, more permanent color standards.
2. Small convenient comparator block.
3. Provision for specific gravity determinations.
4. Addition of phenolphthalein for quick checks and to determine if samples out of the pH range of the set are acid or alkaline.
5. More attractive and convenient carrying case.

Coin-Operated Beverage Dispenser In Small Size

BLOOMINGTON, Ill.—A smaller coin-operated bottled beverage dispensing unit, known as the Model 50, has been added by Ideal Dispenser Co. to the Model 100 unit introduced some time ago. The Model 50 has a capacity of 50 to 55 bottles, and the larger unit a capacity of 90 to 95 bottles.

Simplicity of design and operation is claimed as a feature of the new units. Only moving part in the dispenser, it is said, is a shaft between the coin unit and the trap, through which the bottle is released. This shaft is packed in graphite, and there are no buttons, springs, or sprockets of any kind.

Loading of the unit also is said to be simple, the only operation necessary being the unlocking of a catch bar at the end of the cooler, which gives the attendant access to all alley ways.

The Model 50 will handle as many as seven flavors at a loading, permitting a wide choice of drinks for the customer. Either wet or dry type cooling is available. Both models are equipped with heavy-duty commercial compressors, Model 100 being powered by a 1/4-hp. motor, Model 50 by a 1/8-hp. motor.

Dimensions of the Model 50 are 31 inches long, 27 inches wide, 36 inches high; Model 100 is 42 1/2 inches long, 27 inches wide, and 36 inches high, permitting either model to be placed in locations where space is at a premium.

Coolers are insulated with 2 1/2 inches of glass wool on four sides, and 3 inches of special sealed material on the bottom. Standard cooler colors are white or blue.

Air Supply and Return In Single Device

PITTSBURGH — The Model "SR" Kno-Draft ceiling type air distribution terminal has recently been announced by Plandaire, Inc., here. Built of spun aluminum, the unit combines both air supply and return in one device.

Supply air is discharged from the outer portion of the unit and return air is drawn into the center section. Aspiration takes place in the portion of the device discharging supply air into the room.

The model "SR" Kno-Draft unit is said to be adaptable to all types of cooling, heating, and ventilating installations, and is especially recommended for mobile air conditioning

systems in buses, railway cars, and marine craft.

Spray Booth Coating To Strip Waste Paint

BUFFALO — A new spray booth coating, called "Boothcote," which is claimed to make possible the stripping off of accumulated waste paints, lacquers, and enamels in sheets, without the necessity of scraping, has been developed by Harris Soap Co. here.

Using "Boothcote," it is claimed, does away with the necessity of lining spray booths with paper or cardboard to catch the waste paint. The material can be applied to walls with any standard spray gun. As much as a half-inch of paint can accumulate on top of the coating without the paint falling away from the spray booth wall, it is claimed. "Boothcote" is claimed to be non-inflammable, non-toxic, and harmless to the skin.

Swivel Coupler For Charging Connection

CHICAGO — A new swivel coupler for use in connecting charging lines to service drums, or to charging and testing units, has been developed by Imperial Brass Mfg. Co. No wrenches are required in making connections with this "Kwik-Kupler," it is claimed, and delay due to a broken flare is eliminated.

The couplers embody a soft composition seal gland in the swivel nut



connection, making a pressure-tight seat with the male flare connection when the swivel nut is made finger-tight. The nut is extruded in a special shape, and has grooves to provide a good finger grip.

Couplers are made with 1/4-in. female flare swivel on one end, and with choice of 1/4-in. male flare or female flare on the other end.

★★★★★★★★



Mills Condensing Units
By Mills Novelty Company
4100 Fullerton Ave., Chicago, Ill.

★★★★★★★★

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Now one of the **ALBERT PICK HOTELS**
21 FLOORS OF OUTSIDE ROOMS
EACH WITH COMBINATION TUB & SHOWER
\$2 DAILY SINGLE
From
CADILLAC SQUARE AT BATES STREET
DETROIT

G-E Milwaukee Dealers Rotate Job Of Policing Their Price Agreement

(Concluded from Page 1, Column 3)

The agreement now in effect sets up a price schedule on refrigerators, with allowances on icebox trade-ins set up on a sliding scale. This allowance depends on the selling price of the refrigerator. A straight 2% discount for cash is allowed. This brings the net selling price of the refrigerator to an amount which must be adhered to by every dealer in the group. The customer gets the same "price story" from every dealer.

The agreement also provides for set allowances on electric range and water heater sales. In the case of electric ranges, the allowances are governed by the selling price of the range delivered and installed.

No additional allowances are made on old iceboxes other than set down in the schedule, regardless of whether or not the old equipment is picked up. Proceeds from the sale of old equipment must be retained by the dealer and may not be credited to the customer.

It is also provided that no prospect fees, gifts, or concessions are to be given to anyone either by the dealer or the salesmen, either before or after the sale is consummated.

There are several other provisions which prevent the dealer from giving any little "extras" to land a sale. Dealers are not allowed to give a special allowance to city, county, or government employees, contractors, builders, architects, or purchasing agents of industrial plants. This is in line with a Wisconsin state law.

Because mechanical trade-ins have not yet reached a great importance in the Milwaukee area, no special trade-in schedule has been set up. However, dealers are required to inspect a mechanical trade-in before quoting a price and must produce evidence covering the disposition of this equipment. As the trade-in problem increases, it is expected that a definite schedule will be added to the agreement.

The "big stick" of the agreement, of course, is the right of the distributor to cancel the dealer's franchise in the event of a deliberate violation of the rules set down by the dealers. Four such franchises have been cancelled.

HOW IT IS FINANCED

The system of shoppers is the dealers' own method of making sure everyone in the group is playing "errorless ball." The funds for employing the shoppers are provided by charging the dealer 50 cents extra for every major appliance sold to him by the distributor with a limit of \$20 a month. The distributor chips in 50 cents on every dollar collected from the dealer.

Each month different dealers make up the "shopping committee," with every dealer getting a chance to sit in during the year. These dealers hire the shoppers and only the dealer on "duty" for that month knows the identity of the shopper he employs.

These shoppers are sent around to get evidence of violations of the agreement. The shoppers are trained to chisel with all the tools known to the trade. They back the dealers right up in the corner and plead for a discount or "just a little more on the trade-in."

'DETECTIVE STORY' METHODS

One dealer told of an instance where a shopper had the salesman call at her home, and with witnesses secreted in another room she poured on the heat. "As a result," this dealer said, "there is not a dealer in the group who will get out of line a dime."

Checking on dealer reaction to this agreement, it was evident that they liked the way it was working out. All agreed that the plan put a greater emphasis on salesmanship, service, and store reputation. Best of all—and most important—they pointed to the guaranteed profit on every appliance sold under the agreement.

Said G. E. Inghram: "It's the first time that I could tell the customer the price of a refrigerator and feel certain that that price could not, and would not, be beaten by another dealer. It has not only meant profitable sales, but also better relations among dealers in our group. It has also increased the confidence of the customer in the dealer."

WHAT IT MEANS

B. Greenblatt of Schuster's also endorsed the plan as having eliminated the possibility of cut-price dealers taking the sales away from legitimate dealers who quote one price and stick to it. He explained that to Schuster's, a department store, it eliminated the necessity of offering low-priced specials because the greater profit spread on higher-priced merchandise, and the ability to compete on equal terms with any dealer selling the same merchandise, made the agreement very advantageous.

What the plan has meant to the distributor was explained by E. C. Zabors, sales manager, and W. D. Baker, sales counsellor of E. H. Schaefer Co.

"Under this plan the dealer is making a profit," said Mr. Zabors. "That is the big thing to the dealer. It protects the legitimate appliance outlet, instead of encouraging the fly-by-night dealer. We have seen dealers who have done a \$100,000 business in a year—and haven't made a nickel profit."

"We are asking the dealer to be 'selfish' in cooperating in this plan. That is, selfish to the point of making money for himself. As a distributor we are interested in having dealers who will be in business 10 or 15 years from now."

Winther Gets Factory Sales Post At York

(Concluded from Page 1, Column 2)

Technology, where he pledged Theta Xi and obtained his degree in mechanical engineering in 1928. On leaving college he entered the York student course.

Since 1930 he has been connected with York's Cincinnati office as a sales engineer.

They've Got a New Boss - - Uncle Sam



D. P. HEATH

DETROIT—D. P. Heath, representative for Tecumseh Products Co. in the Michigan-Ohio territory and well-known industry consulting engineer and inventor, has been called into active service by the United States Navy, reporting for duty with the rank of Lieut. Commander.

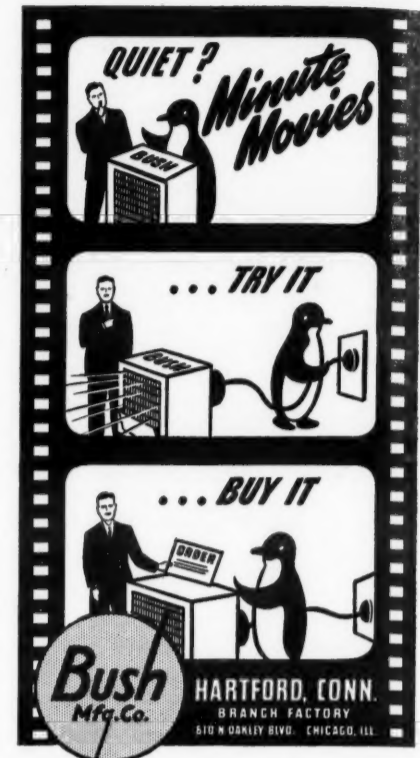
A graduate of the United States Naval Academy at Annapolis, Mr. Heath saw several years of active service in the Navy before retiring in 1920 to get into the refrigeration industry.



GRANT LAYNG

NEW YORK CITY—Sales manager of the Crosley Distributing Corp. of New York, Lieut.-Colonel Grant Layng is one of the nation's youngest regimental commanders in the present emergency.

At 38, Lieut.-Colonel Layng will command New York's famous 71st National Guard Regiment during the coming year's mobilization at Fort Dix, N. J. The regiment, which was formed in 1852, was the first New York City regiment to be called out under the President's order for mobilization of National Guard units.



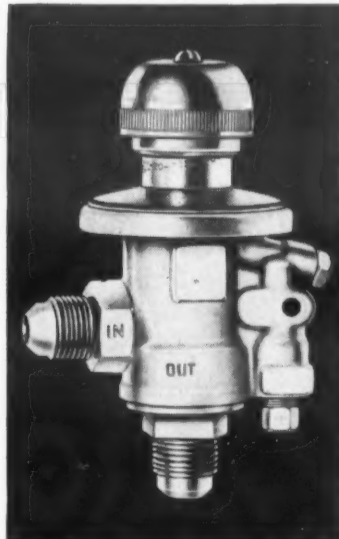
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builds DEPENDABILITY into a full line of Thermostatic Expansion Valves, Solenoids, Suction Pressure Valves, Temperature Control Sets, and the new "TRAP-IT" System-Protectors.

NEW A-P SUCTION PRESSURE REGULATING VALVE

Keeps Constant Pressure in Suction Line where two or more units are run off the same compressor. Equipped with exclusive graduated pressure scale and adjusting knob. Furnished with gauge shut-off valve and gauge connection.



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Ansul Ice-X is the doctor that gives frozen units immediate relief. It ends ice trouble.

Ice-X is hazard-free, safe, easy to use, fully machine tested.

NEW HALF-PINT SIZE—A new smaller size, handy for the service man, in addition to pints, quarts, and gallons. Order a can from your nearby Ansul Jobber today.



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* PREVENTS NEW ICE *

ANSUL ICE-X is equally effective with methyl chloride, acrolein methyl chloride, methylene chloride, and all "Freon" refrigerants. It will not react with refrigerants or oil. It leaves no residue. It will not corrode.

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